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The Journal

OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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MEDICAID MANAGED CARE IN SOUTH CAROLINA
MEDICAL HOMES FOR MEDICAID CHILDREN
SOUTH CAROLINA PHYSICIAN-NATURALISTS
REPORT OF THE AMA INTERIM MEETING

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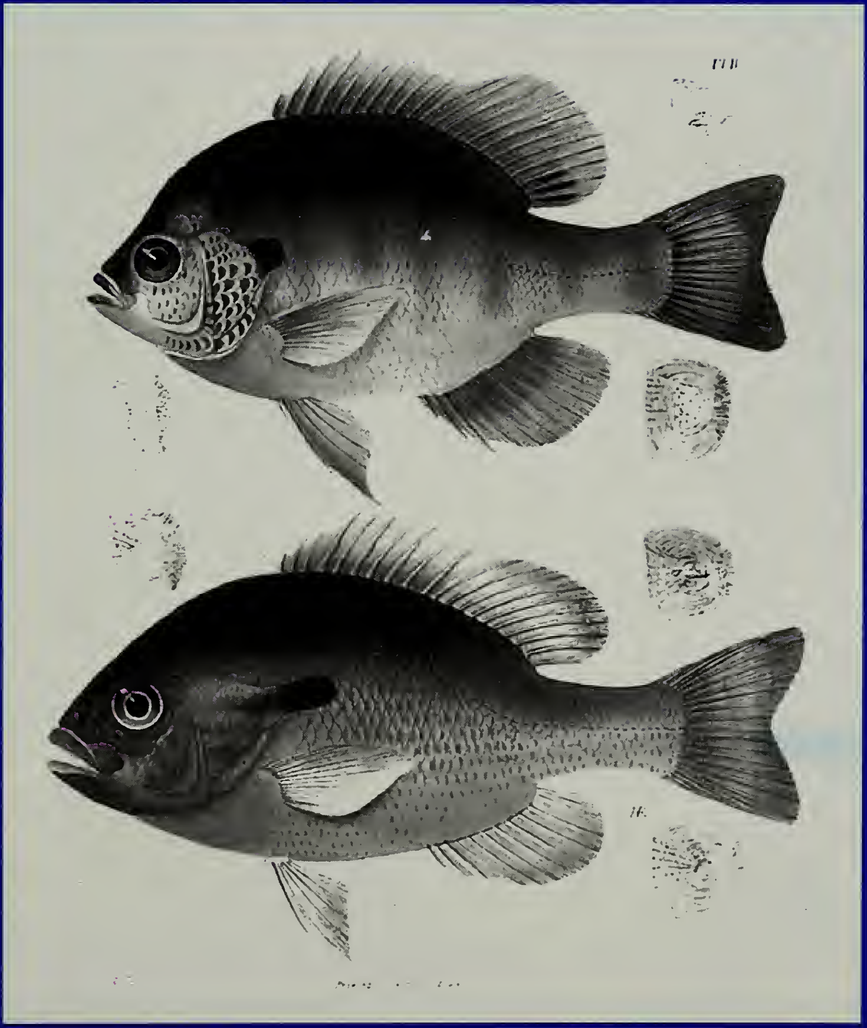

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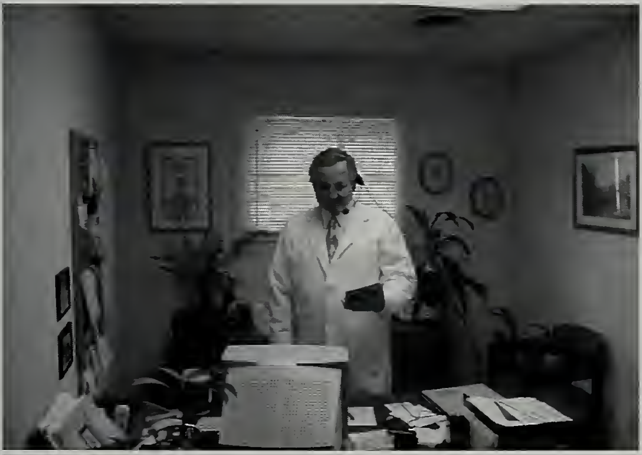

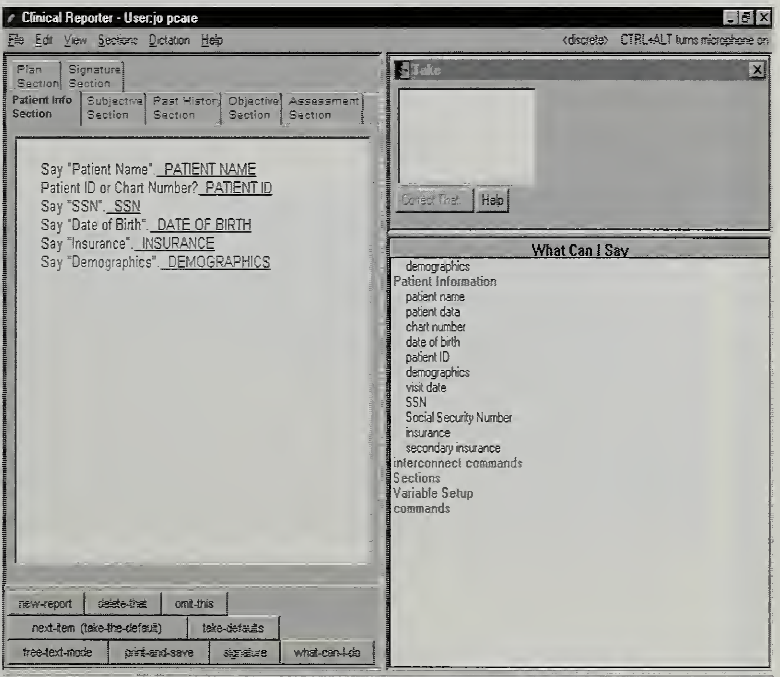

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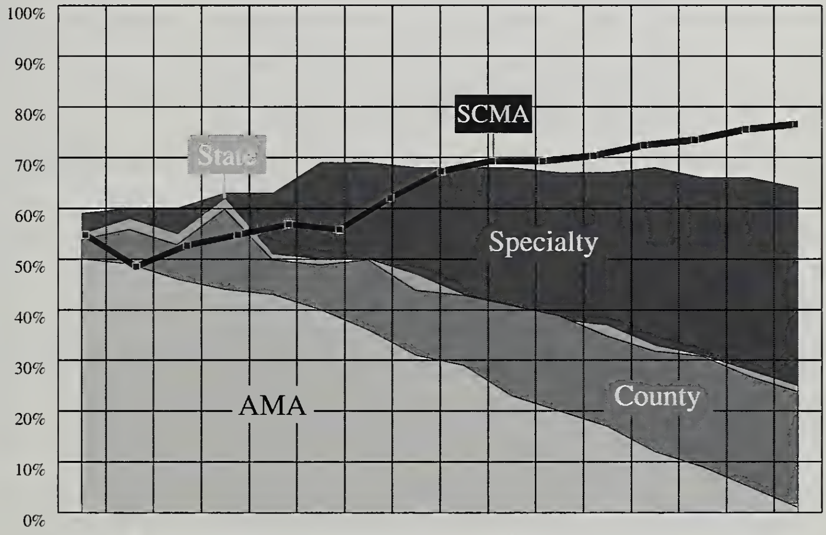
President's Page

WHERE HAVE ALL THE MEMBERS GONE?

The graph to the right shows better than words what is happening to physician membership in organized medicine. It illustrates the market share among federation societies assuming a continuation of current trends. Despite increasing numbers of American physicians, all society membership is either staying the same, thus declining in percentage terms, or declining. If AMA membership stays in the same pattern, the AMA will go out of existence in about twenty years.



No one knows exactly what is happening, but there are probably several factors at work here. Managed and contract care has reduced physician incomes, reducing money for organizational dues. About 50 percent of us are now employed physicians and some employers view organized medicine as competitive to their interests (particularly insurance companies and hospitals). This generation is also more interested in free time pursuits and family time rather than organizational activity.

What does it mean? The obvious result is less organizational dues. It also means less political clout for the national and state organizations. It will eventually mean reduction in programs and activities because of funding cuts. The final result could mean the end of organized medicine as we know it.

What can we do about it? It has been said by one wise owl, "if the AMA goes out of business in six years, we will have to start a new national organization." The good news is that SCMA membership is still rising! We have adapted new technologies in membership services and formed our own successful managed care network. We have kept our polices inclusive and vital and provided value for our dues and dollars. We need to get the AMA and other state medical societies to listen and learn.

Stephen A. Imbeau, M. D.
President

The Journal OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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THE INTERIM MEETING OF THE AMA
HONOLULU, HAWAII
DECEMBER 4-9, 1998

REPORT OF THE SCMA DELEGATION

WALTER J. ROBERTS, JR., M. D.*

The Interim Meeting of the American Medical Association was held in Honolulu, Hawaii, December 6-9, 1998. In attendance were members of the South Carolina delegation to the AMA, whose names are listed in the front of this journal. Our delegation was augmented by the presence of President-Elect Dr. Bill Hester, Secretary Dr. Richard Ulmer, and Treasurer Dr. Capers Hiott. Dr. March Seabrook attended the Young Physicians Section as well.

As I have remarked in the past, several South Carolina physicians who are delegates from specialty societies attend these AMA meetings, adding size and strength to South Carolina's representation. These include Drs. David Osguthorpe, Ed Kimbrough, Greg Slachta, Marion Burton and Jim Scully. These doctors attend some of our caucuses and meetings, providing input from the standpoint of the organizations which they represent, and benefiting their specialty societies from their dialogue with the state delegation.

Our staff support, excellent as usual, was provided by our CEO Bill Mahon and our Senior Vice-President and General Counsel, Steve Williams.

I am sure that all South Carolina physicians know that one of our own, Dr. Randy Smoak of Orangeburg, is the present Chairman of the AMA Board of Trustees. In this most important post, Randy is performing as a knowledgeable, responsible leader, a dedicated and articulate spokesperson for our patients and for the physicians of this country. He is involved in decision-making on medical issues at the very highest level. We are very proud of Randy.

The Interim Meeting is shorter than the Annual Meeting of AMA by one day. Nonetheless, the volume of business conducted seems just as great and the issues no less important and at times, no less contentious. Presented for discussion by the Speakers were some 80 reports and more than 150 resolutions. Each of the items were discussed at Reference Committees and if satisfactory decisions were not accepted, further discussion could ensue at the meeting of the House of Delegates.

As I have done after each AMA meeting, I will attempt to report to you on what I perceive to be some of the most important—which often means the most contentious—issues in "bullet" form.

- For the third consecutive meeting, there continues to be the issue of Medicare Evaluation and Management (E&M) codes. The Health Care Financing Administration (HCFA) has insisted, in a series of "guidelines," that physicians document what level of services have been performed in their offices, from a brief office visit to a comprehensive examination. They must also pay Medicare fees for that service. In the past, these demands, which require a numeric "counting" system, have been viewed by physicians as cumbersome, time-consuming, and irrelevant to the important task of looking out for the patient. HCFA, on the other hand, states that without this level of documentation, proper payment cannot be made.

In 1997, HCFA presented physicians with a new series of such guidelines which are even more convoluted and time-consuming than the previous ones established in 1992 and 1994. The changes, it appears, have been in part due to passage of an act in Congress called the Kassebaum-Kennedy Act. (The correct name of the act is the Health Insurance Portability and Accountability Act.) This act, which has a few good features I believe, has come down hard on the issues of "fraud and abuse" which is envisioned as rampant in Medicare—and allegedly in other—charges.

In this setting, most physicians feel that the government is creating a climate in which physicians should not have to work and that the charge of "fraud and abuse" often represents only simple errors in billing or other aspects of providing medical care. A very searching article outlining and decrying the "guideline" process was written by Dr. Allen Brett, a member of the Department of Medicine of the USC School of Medicine and printed in the *New England Journal of Medicine* several weeks ago; I refer you to it. Also, a recounting of the events regarding E&M guidelines is the lead article in the December 28 issue of *AMNews*.

What transpired at this AMA meeting is as follows: a resolution presented to the House of Delegates from the reference committee was "toughened" by debate on the floor of the House to state that AMA expresses "outrage" that the practice of medicine is characterized as abusive and fraudulent. The altered resolution also once more states opposition to the "numeric counting system" which HCFA clearly intends to enforce in paying for "level of care" in office visits.

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In the House of Delegates, there is an even more vociferous voice which wants physicians to "withdraw" from negotiations with HCFA; to refuse to enter into the debate in the establishment of the new guidelines. In my opinion, this is an untenable point of view, since HCFA has made it clear that it intends to stick by its decision to change the structure of the guidelines, at least at some point in time. As you no doubt know, AMA, along with specialty societies, has been successful in delaying implementation of the new guidelines until at least the end of 1999.

Therefore, AMA is still "at the table," trying to work in conjunction with HCFA through the CPT Editorial Panel, to make the changes less onerous and cumbersome, and to protect physicians from the threat of "fraud and abuse" improperly placed.

• In another and not dissimilar problem, the question of requiring physicians to "justify medical necessity" in ordering individual laboratory tests turned into a rather rancorous debate. A report from the Board of Trustees states that AMA is trying to negotiate with HCFA about the problem and suggests that such negotiations continue. Three resolutions were presented asking in various fashions for relief from some of the "illogical and cumbersome" requirements, which have not been demonstrated to reduce health care costs. The reference committee's decision to follow the recommendations in the Board's report was sustained in the House of Delegates.

• A report from the Council of Medical Services concluded that seeking Medicare coverage for pharmaceuticals would constitute an additional mandate which would find great funding difficulties. HCFA was encouraged to study ways in which parental medications could be provided in non-hospital settings. (CMS Report 11)

• In another related report, over-the-counter medication coverage was looked at by the Council of Medical Services. Again, it was felt that such coverage should not be mandated, unless it is demonstrated that there is no prescription alternative to a cost-effective OTC medication. This appears to me to be a seldom observed scenario.

• A report cites many instances where a billing entity for physicians (e.g., hospitals which have purchased physician's practices), has been less-than-fastidious in collecting physician's fees. The report encourages physicians to become involved in establishing the mechanisms of the billing process and to carefully monitor the adequacy of that process.

• A large group of specialty societies submitted a resolution asking AMA to work with the insurance industry and other interested parties in securing affordable health care coverage for adults who have had congenital or other forms of childhood disease. For example, a child who has had health care coverage for a congenital heart problem may not be able to secure such coverage when adulthood is reached. The issue was referred to the Board of Trustees for study.

• Regarding the issue of collective bargaining and over-broad application of existing anti-trust laws, AMA is in support of a U.S. House of Representatives bill called the "Campbell Bill." It has always seemed to me that the inability of physicians to engage in collective bargaining is patently unfair and in an increasing fashion, has led to physician's interest in unionization—a word which, over the years, has been anathema to physicians. It is pointed out in Board of Trustees Report 24, which was adopted by the House, that this inability to negotiate with insurance companies and other payers not only is an issue of money, but is also an issue of quality of patient care. AMA is asked to continue anti-trust relief legislation as a top priority.

• Back to the issue of "fraud and abuse", a Board of Trustees report states that AMA is expanding its scope of advocacy and is seeking congressional intervention to halt abusive practices by federal agencies, and to encourage these agencies to refocus activities on "traditional" definitions of fraud, rather than attempting to make inadvertent billing errors "fraudulent activity." HCFA has indicated that its efforts toward uncovering fraud and abuse will not be as aggressively undertaken as initially physicians were led to believe, but the agencies which initiate such actions —the U.S. Department of Justice, the Internal Revenue Service, and Inspector General—may well function without the advice and consent of HCFA.

• A far-reaching report from the Board of Trustees asks AMA advocacy that the 106th Congress conduct oversight hearings on HCFA's implementation of the Medicare+Choice program, and that Congress investigate the manner in which HCFA promulgates new rules and regulations.

- In response to a resolution submitted at the AMA Interim Meeting a year ago, the Council on Medical Education presented a report which has studies the medical workforce and the need to adjust the educational pipeline. It is noted thât the number of "physician extenders", such as nurse practitioners, P.A.s, etc., are steadily increasing, and this greatly influences the physician workforce in chosen specialty as well as in numbers. Also influencing these workforce decisions is the number of international medical school graduates coming to this country. It is clear that continued vigilance and study of the numbers of medical school graduates and number of residency slots must take all of these factors into account.

- A report of a survey of national specialty societies has been undertaken by the Council on Medical Education, and it indicates the need for incorporating training dealing with drug, alcohol, and other forms of addiction into many residency programs.

- The Council of Medical Education has studied the "continuum" of medical education with regard to the fourth year of medical school. The Council is of the opinion that often fourth year students select electives which will either be of limited benefit, or select electives which serve as an "audition" for specialty selection which the student may or may not pursue. This may influence the effectiveness of the final year of medical school training. The report calls upon AAMC and residency program directors to work with medical schools in discouraging the practice of "excessive" and ill-chosen electives during the senior year.

- A forceful substitute resolution was adopted, incorporating the resolves of six resolutions introduced with regard to the tobacco settlement. AMA is taking the stance that whatever monies are available after expenditures for tobacco control and education are complete, should be used to increase patient access to medical services. Also, that none of the monies obtained in the settlement be reimbursed to the federal government on the basis of each individual state's federal Medicaid match.

These are some of the issues and problems discussed and debated and all are of enormous importance to the physicians of this country. I can touch on only a few of them in this report. The December 28 and January 4 issues of *AMNews* contain in-depth articles about several other of the important actions of the House of Delegates, and I refer you these issues.

The American Medical Association continues to function effectively as the largest and strongest medical organization in the world. In my opinion, your SCMA delegation is an active and vital part of its activities and success. As it's Chairman, I am most certainly not above proselytizing you—if you are not already an AMA member to become a member. AMA's work is vital to the patient's welfare and to the physician's success in providing for his patients.

I further solicit your input. If you have an idea, a plan, or a "beef" about an issue or a problem, voice it to us, your AMA delegation. I promise you we will listen and attempt to convey your thoughts and interests to the national level.

THE INTERIM MEETING OF THE YOUNG PHYSICIANS SECTION OF THE AMERICAN MEDICAL ASSOCIATION
HONOLULU, HAWAII
DECEMBER 3-5, 1998

REPORT OF THE SCMA DELEGATION

MARCH E. SEABROOK., M. D.*

The 1998 Interim Meeting of the Young Physicians Section of the American Medical Association was held December 3-5 in Honolulu, Hawaii. This meeting brought together young physicians from across the United States, as well as the medical specialty societies and the branches of the uniformed services. There were over 100 registered delegates and alternate delegates.

The Thursday evening session was highlighted by a “mode of practice forum.” This brought together three groups of physicians: the solo and small group practice, the large group and employed physicians, as well as the academic physicians. This was to help gain insight on ways the AMA can better respond to these different groups.

Friday was the assembling of the House of Delegates. There were various reports made, including a legislative update by Julius Hobson, Director of Congressional Affairs. Dr. “Andy” Anderson, Jr., the new AMA Executive Vice President, gave an inspiring talk regarding the future of the AMA. A significant report included for this year’s consideration was the report of the Ad Hoc Committee on “Structure, Governance and Operation.” This has also been referred to as the Booz-Allen Report. This is a lengthy document regarding the structure of the AMA and makes numerous recommendations regarding changes to be implemented.

Young physicians heard debate and testimony regarding a total of 27 reports and resolutions. Issues discussed included greater public awareness of dietary supplements and herbal remedies, patient/physician electronic mail, medical competency examinations, school bus safety, the relationship between physicians, HMOs and drug companies, and the autonomous medical practice on non-physicians. The reference committees met on Friday afternoon. On Saturday, the House reconvened to give final deliberation and vote for the resolutions and reports.

This marks the 11th year of the Young Physicians Section. We are a vibrant group with a strong interest in the future of medicine. You can be proud of the leadership of your Young Physicians Section at the national level. Dr. John Armstrong is a surgeon at Walter Reed Hospital. He is an outstanding Chairman and an excellent motivator. Dr. Bruce Scott is an otolaryngologist in Louisville, KY and has been involved with organized medicine his entire young career. He is articulate and forceful and represents you on the AMA Board of Trustees.

Dr. Randy Smoak, a surgeon from Orangeburg, SC, is currently the Chairman of the Board of the AMA and has been quite visible in his anti-tobacco campaign. You can be very proud of Randy and the other members of the AMA delegation. The SC delegation is well respected and several members are on various councils and reference committees.

The challenges that face the AMA are significant, but I have great confidence in the long-term viability of this organization. It is the driving force of our profession, not just our specialty. The voice must be strong and loud, and membership is of paramount importance.

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OUR EXPANDING SOUTH CAROLINA MEDICAID MANAGED CARE PROGRAM

WILLIAM B. PITTARD, III, M. D., M. P. H.*

In 1965, Medicaid was established as the federal-state program to finance health care for low income individuals. While Medicaid expenditures were moderate in the first years, striking acceleration in expenditures occurred during the 1980's.[1] This escalation clearly indicated a need for effective cost containment strategies. Initially, states attempted to control Medicaid costs by regulating reimbursement levels for medical services, by limiting the number of services paid for, and by controlling eligibility for the Medicaid program. None of these strategies eliminated or significantly slowed the increasing cost of financing Medicaid services and worse, each raised barriers to medical care access by the poor.[2]

Much of the more recent interstate variation in the approaches taken to control Medicaid expenditures was actually initiated by the passage of the Omnibus Budget Reconciliation Act (OBRA) of 1981. OBRA encouraged states, through the program waiver application process, to develop new initiatives to both curb cost and to improve the delivery and payment mechanisms in use by Medicaid. This legislation, in conjunction with the apparent success of capitation and case management in containing private health care costs, led several states, including South Carolina, to use program waivers to introduce prepaid or managed care case management plans into their Medicaid reform efforts.[2-4] Subsequently, Medicaid managed care rapidly expanded nationwide[1], but the efficacy of these reform measures awaits confirmation.

South Carolina Medicaid reform efforts are becoming more apparent. The total state population per the 1990 census was 3,673,287 with 28.6 percent below the age of 21 years. Based on the data provided by the South Carolina Department of Health & Human Services in March of 1998, the total Medicaid enrollment in South Carolina was 430,149 with 237,705 under age 21. More specifically, South Carolina Medicaid covered one in four individuals (children) under age 21 and 47 percent of all South Carolina births.[6] While only three percent of South Carolina Medicaid beneficiaries were in 1995 enrolled in a managed care program,[5] by 1998, this percentage had doubled. Further, 9.5 percent of South Carolina Medicaid enrollees below age 21 were in managed care programs in 1998. Thus, while not readily apparent, greater than 25,000 (6 percent) South Carolina Medicaid enrollees are today in a managed care program.

The South Carolina Medicaid Managed Care Program (SCMMCP) offers to Medicaid beneficiaries a choice of three voluntary managed care delivery systems. These include a capitated model

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* Address correspondence to Dr. Pittard at 165 Ashley Ave, Room 679, Charleston, SC 29403.

SOUTH CAROLINA MEDICAID MANAGED CARE ENROLLEES AS OF MARCH 1998

PROGRAM	ADULTS	CHILDREN[1]	TOTAL
PEP[2]	708	4,869	5,577
HOP[3]		14,534	14,534
HMO[4]	2,287	3,286	5,573
TOTAL	**2,995**	**22,689**	**25,684**

[1] 21 years of age or below
[2] Physician Enhanced Program
[3] Healthy Options Program
[4] Health Maintenance Organization

Table I.

called the Physician Enhanced Program (PEP), the Healthy Options Program (HOP), which is designed only for children thru age 18 and a Health Maintenance Organization (HMO) program, which is a second capitated model.

The Physician Enhanced Program (PEP) was initiated in four select South Carolina primary care practices in May 1996. The objective for the PEP program was to link Medicaid beneficiaries with a primary care provider who would deliver all basic medical needs. The PEP physician provides a package of basic services for recipients and receives a payment from the State Department of Health and Human Services (DHHS) at the end of each month based on the number of PEP members enrolled in his/her practice. This payment is adjusted for enrollee age, gender and category of eligibility. The initial four pilot sites were selected to test the PEP concept and to refine the PEP service delivery model. It was anticipated when started, that upon successful completion of the PEP pilot project and correction of any problems encountered, this Medicaid managed care alternative would then be offered on a statewide basis.

Medicaid recipients who are not eligible to enroll in PEP include those age 65 or older or who are dually eligible for Medicare/Medicaid, those who reside in a nursing home, those who receive hospice services or other special waiver services, and those who are enrolled in the Optional Coverage for Women and Infants (OCWI) Medicaid coverage group.

The PEP primary care providers are responsible for arranging or authorizing all primary care services for their PEP enrollees. They also authorize necessary specialty care, hospital care, family support services, and other required ancillary services. As primary care providers, these physicians also provide a mechanism for 24 hour per day, seven days per week enrollee medical coverage for emergency services. Finally, PEP providers maintain a unified patient medical record, which includes documentation of all authorized services. As is customary of most primary care physicians, PEP PCPs establish a system for identifying, scheduling, and providing well child care and immunizations. In summary, in establishing a medical home for PEP enrollees, the PCP is expected to provide preventive health examinations, immunizations, comprehensive primary care services, limited laboratory procedures, EKGs, hospital care, some minor office surgeries, and family planning services.

PEP enrollees are directed to contact their PCP before seeking emergency care except for life threatening circumstances. The PCP then has the responsibility of authorizing appropriate care and denying authorization for inappropriate care. Similarly, PCPs are responsible for referring their patients for Medicaid reimbursable services that they are unable to provide themselves, such as specialty care and certain ancillary services.

For the years 1997-1998, 5,577 Medicaid beneficiaries or 1.3 percent of all state Medicaid recipients, and 4,869, or two percent of South Carolina's 237,705 Medicaid enrollees under age 21, were enrolled in PEP. The program is offered statewide and as of March 1998 included 14 group practices, 54 physicians, and eight nurse practitioners as providers. Enrollee care and health outcome is monitored primarily through provider service billing.

The second SCMMCP is the Healthy Options Program (HOP). This model was initiated in August 1997 and was specifically intended to establish a medical home for Medicaid recipients age 18 and under. The services provided under the Healthy Options Program are numerous and include: provision of preventive care as well as treatment of illness, establishment of a mechanism that allows patients to reach a "live voice" twenty four hours a day, seven days a week, identification and authorization of specialty care, hospital care, family support services and other necessary ancillary services, partnering with public and private entities such as schools, employment agencies and health departments to ensure that special needs of the individual patient are addressed, and finally, to facilitate maintenance and centralization of medical records.

This program differs from the PEP in that the HOP is only for Medicaid beneficiaries thru age 18 and the HOP PCP can refer enrollees to other facilities for some primary care examinations such as Early and Periodic Screening Diagnosis and Treatment (EPSDT) Program. Clearly the major Medicaid goal for the HOP program is provision of a 24 hour per day support service or a medical home for Medicaid children and adolescents. With the exception of Federally Qualified Health Centers and Rural Health Clinics, HOP providers receive enhanced rates when billing office visits other than EPSDT examinations. All EPSDT examinations and immunizations continue to be billed at the usual state Medicaid reimbursement rate.

Although the HOP was only initiated in October 1997, it had 14,534 enrollees by March 1998. This represents six percent of the 237,705 South Carolina Medicaid beneficiaries below age 21. Currently the HOP has 244 providers and has sites in 29 counties. HOP enrollee care and outcome is monitored solely via the provider bills received by the South Carolina Department of Health and Human Services (DHHS).

The third SCMMCP model is a Health Maintenance Organization (HMO) component. The HMO provides a medical home for Medicaid enrollees and at a minimum, all services outlined in the core benefit package described in the HMO contract. The South Carolina DHHS pays a capitated rate per member per month according to age gender and category of eligibility. This program was initiated on July 1, 1996. The State DHHS contracts with three Health Maintenance Organizations (HMOs) licensed and headquartered in South Carolina.

The South Carolina Medicaid recipients who are not eligible to enroll in this HMO model include those age 65 or older or who are dually eligible for Medicare/Medicaid, those in a nursing home, family planning waiver recipients, home and community based waiver recipients, hospice recipients, and those already enrolled in a HMO through third-party coverage.

The HMO is responsible for providing all medically necessary and appropriate care for Medicaid HMO program members. The core benefits include inpatient hospital services, outpatient services, physician services, maternity services, family planning services, independent laboratory and x-ray services, durable medical equipment, prescription drug services, podiatry services, ambulatory transportation, home health services, and to a limited degree, mental health and alcohol and drug treatment services. The HMO also must make provisions for advice to all Medicaid HMO program members regarding the use of emergency room services as well as the coordination necessary for the referral of Medicaid HMO program members to specialty providers and to out of plan services.

For the years 1997-1998, 5,573 Medicaid beneficiaries were enrolled in a South Carolina Medicaid HMO program. This included 2,287 adults and 3,286 individuals (children) under age 21. The state DHHS contracts with a peer review organization (PRO) to perform an annual external quality assurance review of all Medicaid HMO enrollees. In this regard, the HMOs are required to submit encounter data on all services rendered to Medicaid HMO program members and to maintain records on health quality indicators including childhood immunization status, pregnancy outcome, and EPSDT screening visits.

In summary, as of March 1998, the South Carolina Medicaid program had 430,149 enrollees, including 237,705 under age 21. The SCMMCP included 5,577 (1.3 percent) in the PEP, 14,534 (3.4 percent) in the HOP, and 5,573 (1.3 percent) in an HMO or 25,684 (6.0 percent) Medicaid enrollees in a primary care, case management, managed care program (table 1). Further, almost ten percent of the state Medicaid enrollees under age 21 are provided managed care coverage. Thus, clearly the new state Medicaid reform program intended to limit expenditures without reducing access to care has been initiated.

But, there is still the question of program effectiveness, which extends beyond cost efficiency. Since the implementation of South Carolina Medicaid managed care programs represents a significant change in the method of delivering health care service to enrollees, it clearly creates a striking need to monitor the impact of these changes on the accessability and outcome of care. Indeed, what is not known (but should be) about Medicaid managed care programs includes: the long-term impact on cost and utilization, the effect on outcome and health status, variations in outcome by model and plan type, profitability of Medicaid for health plans, and generalizability of findings to rural areas. While external quality review organizations, serving in a consultative role, have and will continue to provide valuable data evaluating the state HMO component of Medicaid managed care, a well designed and ongoing system of review is needed both nationally and here in South Carolina for comprehensive evaluation of each model of this new and rapidly expanding form of health care reform.

The South Carolina Medicaid managed care program is thought to be providing excellent care for Medicaid enrollees, but the lack of a formal system for evaluation makes the validity of this thinking uncertain. The HOP and PEP Medicaid models have no systematic method in place to document access, or outcome, or even to confirm cost effectiveness. Indeed, the entire system for monitoring the utilization and outcome of services by the majority of SCMMCP enrollees is through data obtained from provider billing.

Much of the data needed to monitor the Medicaid managed care programs could be obtained from the patient's medical records maintained by the primary care providers, perhaps supplemented with data from the vital statistics division of the South Carolina Department of Health and Environmental Control. However, the specific questions to be answered and the health indicators to be monitored must be established immediately as the managed care programs are already being implemented. These data are needed not only to document program success but to insure the early detection of any adverse effect of managed care on the health of Medicaid enrollees.

For each of the South Carolina Medicaid Managed Care programs, information needed includes data on enrollee satisfaction (perhaps obtained via an enrollee survey) as well as health status indicators for enrollees, such as the infant case fatality rate, the percent of women beginning care in the first trimester of pregnancy, the percentage of low birth weight deliveries, and the percent of premature deliveries. Similarly, data indicating access to and provision of well child care is needed, including the percentage of two year olds, as well as, those at the time of first grade entry with required immunizations, and those who receive routine EPSDT examinations. In addition, subsets of data describing individuals with special health care needs must be carefully assessed to be certain enrollees with unique needs are being served.

To monitor these programs, a specific mechanism for data collection is required. A central location for data submission and a consistent mechanism for reporting each enrollee encounter (as is currently in place for Medicaid HMO providers) would facilitate data collection and summarization, and would allow comparisons of enrollee outcome in different program models. These data generated on a regular (annual) basis, will provide the State Medicaid agency the information needed to fine tune their exciting new Medicaid reform initiatives and to confirm the positive outcome anticipated. ❑

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PUBLIC-PRIVATE PARTNERSHIPS: WORKING AT THE LOCAL LEVEL TO INCREASE THE QUALITY AND NUMBER OF MEDICAL HOMES FOR MEDICAID CHILDREN

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For decades, a major issue of both interest and frustration to public health planners has been access to health care for children considered at-risk. One survey on the topic revealed that ten percent of children have no regular access to care and eighteen percent use emergency rooms as their primary source of care .[1] These findings, however, are not universally applicable to children in all settings. Rather, it is in rural areas and inner cities where large pockets of disadvantaged children have little or no access to the pediatric health care system. Yet, by nature of their life circumstances, these disadvantaged rural and inner city children have even greater need for quality primary care services.

Several programs have sought to address these challenges. Medicaid expansions in many parts of the country have increased the financial resources available for children's health care. For many years, the National Health Service Corps has placed health professionals in communities burdened by limited services. Rural health clinics and federally qualified health care centers have expanded access to primary care for communities in need. New categories of clinicians, such as nurse practitioners and physician assistants, have increased the available provider pool. Health departments have filled gaps where needed. These efforts have succeeded in improving access to care for many children, yet there is still much work to be done.[2]

In the early 1990's, health planners in South Carolina began to concentrate on the issue of access by asking two questions. How could they collaborate with private providers to increase the number of medical homes available to children in the state and at the same time, decrease fragmentation of care by incorporating public health services into both new and existing sites of private pediatric care? Similarly, private health care providers began looking at strategies to improve health care access through the CATCH (Community Access to Child Health) program of the American Academy of Pediatrics. CATCH, in recognition of the fact that communities differ in their problems and resources, was founded at the Academy's national level on the premise that issues of access are most effectively addressed locally, with state and federal support. Working from this approach and mindful of the health planners' focus, the chapter CATCH facilitator visited each of the thirteen health districts around the state, and worked with local clinicians to develop access plans within their communities.

In concert with these efforts, the South Carolina Department of Health and Environmental Control (DHEC) chose four communities to receive three-year grants. The selected sites were challenged to create innovative public-private partnerships aimed at enhancing the capacity of local health care systems to provide medical homes for Medicaid recipients. Strategies were to center on reducing fragmentation by incorporating public health into the delivery system. Additionally, DHEC encouraged a focus on the medical home needs of children with special health care needs into their programs. The experiences of these communities as they developed true partnerships and improved access to pediatric care are described below.

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Barriers to Care: Local public and private providers began by identifying various sub-issues as they tailored the state's plan to fit local needs. Community partnerships addressed such issues as geographic barriers[3], fragmentation of care, the special needs of medically complex children, obstacles to participation in Medicaid by local physicians and nurse practitioners, and barriers to performing Early and Periodic Screening Diagnosis and Treatment (EPSDT) Program visits.

Several providers believed that children with special health care needs were more likely to suffer from fragmentation of care than were others. It was noted, for instance, that although many did in fact have a medical home, they often obtained immunizations from the health department, received treatment for acute care problems at night in the emergency room, accessed specialty services through the state title V agency, and saw specialists at a distant medical school, all with little coordination or oversight protection. The result was a complex of disconnected services that frequently were redundant, incomplete, and expensive.[4,5]

South Carolina clinicians also found barriers to participation in the Medicaid program. Factors identified as affecting participation included community size, practices' capacities for additional patients, clinicians' willingness to accept Medicaid reimbursement rates,[6] and the availability of other community resources to provide for Medicaid patients.[7,8,9] Providing Medicaid well-child services (EPSDT visits) was even more problematic. Preventive in nature, EPSDT is designed to provide the foundation for promoting and maintaining children's health, in turn saving scarce acute-care dollars. Even with adequate access to Medicaid services, many children still do not receive the full complement of scheduled EPSDT visits as scheduled. Identified obstacles to care include perceived barriers in the health care system, conflicting concerns and priorities within the family, excessive waiting times in medical offices, transportation problems, and difficulties with scheduling. [10] Improving access to care for Medicaid patients involves tackling these very real concerns.

Developing Local Public-Private Strategies: In the partnerships described here, methods to overcome barriers to care centered on local control, with site-specific access plans developed in each location. This focus echoed the emphasis placed by earlier innovators on the need for community approaches to problems of health care access.[11,12] Indeed, there appears to be great receptivity on the part of pediatric clinicians to involve themselves in locally generated strategies to improve access. As an illustration, in a survey of members conducted by the CATCH program in Colorado some years ago, fifty-eight percent of respondents reported that they took part in access-oriented community-based activities outside the confines of their offices.[13]

Private and public sources of health care have complementary expertise that can be synergistically effective. Most private clinicians provide a professional medical home for their patients. Such homes are designed to deliver preventive and acute care, are available twenty four hours a day, follow patients longitudinally over time, have flexibility in their care patterns, and provide at least some care coordination.[14] Medical homes concentrate on the problems of individuals and their families, and are dependent on reimbursement to continue to provide services. Public health sources, by contrast, usually are concerned with the health problems of the community as a whole, have governmental resources, and have epidemiological capabilities not readily available in the private sector. By taking a global view of the community, public health sources are more oriented to searching for solutions to fill gaps in the health care delivery system.[15]

Bringing public and private resources together is certainly not a new idea. Children's Medical Services in Florida is a well-established public-private partnership with a priority focus on children with special needs.[16] In Canada, public health nurses are attached to primary care offices, resulting in a significant increase in referral to public sector services by the primary providers involved in the program.[17] Public health nurses in North Carolina carry out home-based interventions to promote patient use of medical homes. The nurses provide parental education and social support, and encourage families to take advantage of the services of their medical home.[18] Bridging the gap between public and private sources of care is critical if providers truly intend to offer coordinated medical home services that meet the complete health needs of children.

Community Initiatives in South Carolina: In 1993, DHEC invited pediatricians from four diverse communities to sit down with their local public health directors and develop site-specific plans to improve the number and quality of medical homes within their localities. In Easley, there had already been ongoing consultation and problem solving between Dr. Kent Jones and the district health department. A large portion of private pediatric care in the Easley area was provided by family practitioners. However, acceptance of Medicaid varied throughout the county, resulting in a disproportionate share of these patients in one pediatric office and those of certain family practitioners. The initial solution was to have all providers accept a small number of Medicaid newborns on a rotating basis. However, the Easley group was still faced with inadequate capacity to meet demand. Under the new initiative, a partnership with the health department was developed in which a public health-funded nurse practitioner was placed within the pediatric office to provide EPSDT and acute care services.

In Lancaster, Dr. Dexter Cook was concerned with the inefficiencies of the EPSDT system. His practice suffered from a high no-show rate for EPSDT patients. Since these patients missed receiving the appropriate preventive care advice that is part of every well child visit, Dr. Cook had difficulty handling the volume of phone inquiries in his practice each night. The Lancaster solution was to assign public health nurses as case managers to Medicaid newborns in the hospital, have the nurses assess the newborns at home at several days of age, and reinforce to the parents the importance of keeping appointments for their preventive care visits. The public health nurses shared after-hours call with the private practitioners, taking phone inquiries from Medicaid families until ten p.m. each day. This partnership has been recognized as one of the more successful innovations of the state project, and has become the prototype for family support services now offered by DHEC throughout South Carolina.

The Beaufort providers had two concerns. One was that patients at the far end of their health district often had to travel in excess of fifty miles to see a pediatric clinician. Secondly, there was concern over the fragmentation of care and inadequate coordination of services received by children with special needs. The solution involved two efforts. First, there was health department assistance in developing a satellite medical home facility in Hampton, thereby increasing the capacity of the local health care system to provide medical homes for these geographically isolated children. The plan included placing a public health nurse in the Hampton office to link patients to health department services. Beaufort pediatricians also agreed to provide general pediatric clinics for Children's Rehabilitative Services (CRS) within their offices, using public health staff for non-physician services. This arrangement allowed for greater communication and coordination between CRS and the local medical home. Providers in Columbia were also concerned about medical homes for CRS patients with special health care needs. A medical home was developed on the USC medical school campus for unattached children with special needs, staffed by a public health pediatric nurse practitioner and an administrative nurse coordinator.

Evaluation of the Partnerships: In the fall of 1996, planners and providers sat down to discuss the effectiveness of the strategies created to improve access. Evaluation proved difficult from many angles. Although all plans had the same goal in common, each employed a different methodology in response to individual community needs and resources. Furthermore, during the project's two-and-a-half years, unrelated changes in several communities affected local capacity to provide Medicaid medical homes. Additionally, no qualitative processes had been instituted to assess clinicians' reported observations that the quality of the medical home services available to Medicaid families had improved.

In late 1996, individuals from DHEC, the University of South Carolina, and the private sector met to consider how best to gather data on the project's effectiveness. One of the evaluative steps

Community:	**Ham.**	**Lan.**	**Eas.**	**Col.**
Did the public-private partnership result in?				
increased numbers of medical homes for Medicaid children?	yes	yes	yes	yes
improved access to medical homes for children?	yes	yes	yes	yes
decreased geographic barriers to medical home access?	yes	no	yes	no
expanded number of Medicaid children in private medical homes?	yes	yes	yes	no
decreased fragmentation of care for Medicaid children?	yes	yes	yes	yes
more medical homes for children with special needs?	yes	yes	no	yes
integrated public and private sector services for children with special needs?	yes	no	no	yes
decreased perinatal mortality within the community?	dk[1]	dk	dk	yes
improved relationships between public and private providers?	yes	yes	yes	yes
further collaborative projects?	yes	yes	no	no

[1] dk stands for don't know.

Table 1. Results of Focus Group Interviews

developed was focus groups at each site to elicit providers' impressions of the programs they had initiated. At each location, the project's public and private providers met individually to provide information. The responses from both public and private providers were very similar.

Providers were first asked if general access to medical care for Medicaid children had improved in their communities, and if so, for what reasons. They then were asked to identify the roles that their particular programs had played in improving access. Specific questions were formulated to assess whether each site had accomplished the project objectives outlined in Table 1. Lastly, participants were asked whether they would recommend these public-private initiatives to their colleagues and were queried as to potential do's and don'ts for those involved in similar endeavors. (Table 1)

Increased numbers of medical homes for Medicaid children?: Increasing the number of medical homes for children with Medicaid was a top priority of health department officials involved in creating the public-private partnership project. Focus group results showed universal agreement among all providers that this goal was achieved, albeit by various techniques. Health department officials also were interested in determining whether an increase in the number of medical homes could be associated with decreases in the target counties' perinatal mortality rates. During the time period in question, a dramatic statewide decrease in the perinatal mortality rate occurred, but most of the local providers hesitated to take credit for this improvement based solely on their activities. Providers in Columbia stated that they believed there was a link, but clinicians in other communities thought that there was insufficient data to draw such a conclusion.

Local partnership responses in the focus groups reflected their own goals as they worked to formulate site-specific strategies to improve access. For instance, the Hampton-Beaufort site identified geographic barriers to care as a major impediment to child health care access in the Low Country Health District. Easley identified the capacity of the system to accommodate Medicaid patients as their primary focus. Lancaster's partnership addressed capacity as well, and also focused on care coordination and care fragmentation. Columbia and Hampton-Beaufort both targeted the unique barriers faced by children with special needs. In some cases, strategies directed at one barrier resulted in unintentional but positive impacts on another. The Easley partnership, for example, reported that its focus on system capacity affected geographic barriers by decreasing the number of patients who formerly had to travel to Greenville for care. Partnership efforts were not always successful. The public health nurse component of the Hampton project initially was poorly defined and the person originally hired left in frustration. After re-defining the role of the public health nurse, she has become an integral part of the health care team.

One particularly gratifying consequence of the partnerships was the strong relationship that developed between private practitioners and their public health colleagues. Working together enhanced each group's appreciation for the contributions of the other, and culminated in a willingness to consider further affiliations. In Beaufort, two new collaborations evolved directly from the project: a family support initiative to place a public health nurse in the private pediatric office (modeled after the Lancaster program), and a collaboration between the school system and the public-private health partners to provide comprehensive infant well child care in a group format on a school campus. In Lancaster, the partnership resulted in a new effort to link pediatricians with the school system, the health department, and the University to provide a broad array of services to children.

Do's and Don'ts: The local providers involved with the South Carolina partnerships had several recommendations for those considering similar endeavors. They suggested that partners should:

- have a clear understanding of each partner's role(s) from the start.
- provide time for on-going collaboration.
- remember that communication is essential.
- be flexible as to strategies, moving on when specific ideas don't work.
- share an equal commitment to making the partnership work.
- develop a trusting relationship and build on it with further collaboration.
- let local participants make local decisions at the community level.
- get broad-based support from the community.
- use charisma where it's found: the programs in this partnership that worked the best had a charismatic person who took the initiative to make sure partners moved into their new roles successfully and stayed on target.

Summary: We have described a process in which one state's public health leaders provided a large degree of flexibility at the community level to improve pediatric health care access for children in need. This "room-to-wiggle" allowed program providers to tailor their programs to the specific needs of their communities while remaining faithful to the statewide goals. Among the most promising outcomes of the coordinated efforts to forge public-private partnerships is the continuation of the relationships that developed in the process and the further collaborations they have spawned. ❑

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SOUTH CAROLINA PHYSICIAN-NATURALISTS, 1835-1895

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The natural beauty and diversity of South Carolina has made this state a haven for the study and appreciation of nature. The first settlers marveled at the wilderness. Early naturalists such as Mark Catesby, William Bartram and John James Audubon traveled extensively in the state, beautifully recording their observations. During the 18th and 19th centuries, South Carolina, particularly Charleston, became a major center for the study of natural history. Thomas C. Johnson wrote in 1936, "If it is ever safe to imply that the people of a given geographical area are predominately possessed of a definite intellectual trait, we may venture to assert that a delight in the observation of natural phenomena and a somewhat naive curiosity about the forces of nature have been from the very beginning characteristics of the people of the Southern States."[1]

Much of the study and discovery in natural history, from the colonial period to the War Between the States, was performed by physicians in their leisure time. "The prominence of physicians in natural history was no accident and resulted from the medical training of the day which afforded an introduction to the study of the science of nature . . . These studies were seldom profound, but they did provide the best academic foundation available in natural history, and often stimulated continuing interest and study."[2] Botany held great importance in antebellum medicine and while many physicians became well-known botanists, few were, in their knowledge and interest, limited only to this area of natural history.

In *Natural History and the American Mind*, William Smallwood states that "the naturalist's period in America covered roughly the century and more from 1725 to 1840 or 1850" and "reached its climax in the period 1830-40."[3] The period from 1835 to the Civil War was a particularly active and productive time for South Carolina physician-naturalists. Men such as John E. Holbrook, Edmund Ravenel, Robert W. Gibbes, F. Peyre Porcher, St. Julien Ravenel, and Lewis R. Gibbes were physicians who lived and worked in South Carolina during the climactic period of natural history. The well known naturalist and physician, Louis Agassiz, spent two winters in Charleston lecturing at the Medical College and in the community. While in Charleston, Agassiz befriended a number of the South Carolina physician-naturalists. John Bachman and Henry William Ravenel were closely associated with this group of physician-naturalists, though they were not physicians themselves. These men made many lasting contributions to both South Carolina medicine and natural history. Before examining their lives and influence, three of the early physician-naturalists who largely shaped American natural history and provided a base for South Carolina natural historians, Drs. Alexander Garden, J. L. E. W. Shecut, and Stephen Elliott, should be introduced.

Dr. Alexander Garden (1725-1791) was born and educated in Scotland. He arrived in South Carolina in April 1752 and began a medical practice in Prince William's Parish but, due to an illness, moved north for two years shortly after his arrival. Dr. Garden was a scholar in many fields, though "his attention, when the duties of his profession permitted any relaxation, was chiefly to the study of natural history and particularly to that branch which is called botany."[4] Upon returning to South Carolina in 1755, he accompanied Governor James Glen on an expedition to Cherokee country. He made many discoveries of flora and fauna in that part of the state about which little was known.

While living in the North, Garden met and began correspondence with other natural historians such as Cadwallader Colden and John Bartram. It was through his friendship with the

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British naturalist, John Ellis, that Dr. Garden began collecting for and corresponding with the great Swedish botanist Linnaeus. In 1761 Linnaeus showed his appreciation for Dr. Garden by giving his name to the beautiful Gardenia. His international respect was again acknowledged when he was elected into the Royal Society of London in 1773. He was the only member from Carolina and in 1783 became vice-president of that prestigious society. Dr. Garden is credited with the descriptions of three new genera of plants, two new genera of fish, and sixty new species of serpents, insects and fish.[5] He returned to England after the Revolution and died in 1791. His many accomplishments in the realm of natural history began a trend that was to last a hundred years.[6]

In the wake of Alexander Garden, Dr. John Lewis Edward Whitridge Shecut (1770-1836) practiced medicine in Charleston and in 1806 published *The Flora Carolinaensis, or a Historical, Medical, and Economical Display of the Vegetable Kingdom according to the Linnaean or Sexual System of Botany.*[7] Wilson Gee called it "the most extensive work on botany of the state published up to that time."[8] In his 1819 *Medical and Philosophical Essays*[9], Dr. Shecut attempted to prove that yellow fever is caused by electrical variations in the atmosphere. He also experimented with the use of electricity in the treatment of disease. Dr. Shecut was among the founding members of the Literary and Philosophical Society of South Carolina which was organized in 1813.[10] Dr. Shecut recorded that "the objects of this Society were to be, primarily, the collection, arrangement and preservation of specimens in natural history; and of things rare, antique, curious and useful; and secondarily, the promotion and encouragement of the arts, sciences and literature, generally."[11]

A contemporary of Shecut, Dr. Stephen Elliott (1771-1830) was a highly regarded botanist who devoted all of his leisure time to the study of natural history. From 1816-1824, Dr. Elliott wrote and published the elaborate *Sketch of the Botany of South Carolina and Georgia*[12], one of the classics of American botany. A number of plants bear his name including the shrub *Elliotia.* Although Dr. Elliott never attended medical school, he was bestowed an honorary M.D. by the newly formed Medical College of South Carolina. He was instrumental in securing a charter from the state legislature for the establishment of the school which opened with him as the chair of Natural History and Botany in 1824. Dr. Elliott was enthusiastically elected as the first president of the Literary and Philosophical Society of South Carolina in 1814.[13] He died suddenly in Charleston in 1830. His accomplishments and dedication to natural history in South Carolina were recognized when, in 1853, the Elliott Society of Natural History was named in his honor.[14]

Of the physician-naturalists active between 1830 and 1865, John Edwards Holbrook is most notable. He was born in Beaufort, South Carolina on December 30, 1794, to Silas Holbrook, from Massachusetts, and Mary Edwards of South Carolina. His family soon moved to Wrentham, Massachusetts where he spent his childhood. Dr. Holbrook attended Brown University, receiving his A.B. degree in 1815, and University of Pennsylvania where he was awarded his M.D. in 1818. After a brief time in private practice in Boston, he traveled to Europe. He studied medicine in Edinburgh for two years and spent two more years in England, France, and Germany. Dr. Holbrook's time in Paris largely impacted his career as he studied at the Jardin des Plantes and formed friendships with the European zoologists Cuvier, Valenciennes, Dumeril, and Bibron. Dr. Holbrook returned to the States in 1822 and began a private practice in Charleston, South Carolina. His personal charm and bedside manner were well-received and in 1827, he wed Harriott Pinckney Rutledge, a daughter of prominent Charleston families.

When the Medical College of South Carolina was organized in 1824, Dr. Holbrook was appointed as the first chair of anatomy, a position in which he served for thirty years. Upon his resignation, the *Charleston Medical Journal and Review* reported that "as a lecturer on anatomy, Dr. Holbrook probably had no superior anywhere. His knowledge of Human and comparative Anatomy, and his acquaintance with the laws of structure and organic development were profound, accurate and philosophical."[15] His students not only gained insight of the human body, but "he inspired his students with a love of nature, and made them indeed, in not a few instances, naturalists and men of science, as well as physicians."[16]

Dr. Holbrook's great accomplishment as a naturalist was the five volume, *North American Herpetology; or, a Description of the Reptiles Inhabiting the United States.*[17] Work on this text was begun in the 1820's with the first volume published in 1836.[18] Two more volumes followed in 1838. Dr. Holbrook revised his methods and in 1842, a five volume set under the same title, was published. A network consisting of herpetologists, naturalists, physicians, and amateurs throughout the country had been used by Dr. Holbrook to obtain specimens. His desire for a high quality work led him to demand that all illustrations be in color and drawn from live examples. Dr. Holbrook himself collected reptiles in every state from Maine to Georgia and is credited with naming twenty-nine new species. Nine years after the publication of *North American Herpetology*, Dr. Holbrook was declared "Father of American Herpetology," a title which he holds today.[19]

In the late 1840's and 1850's Dr. Holbrook turned his attention to publishing a work on southern fish. One volume of *Southern Ichthyology; or a Description of the Fishes Inhabiting the Waters of South Carolina, Georgia, and Florida*[20] was released in 1847. Realizing the size of the task he had undertaken, he narrowed his scope, publishing *Ichthyology of South Carolina*[21] in 1855. Before the set was complete, however, a fire at the publishers destroyed the plates and stones. Dr. Holbrook recalled the first edition and, in 1860, issued a revised edition that was superior to the first and on par with his herpetology text.

Dr. Holbrook's scientific career ended when the shots were fired on Fort Sumter. During the war, he served as the chairman of the Examining Board of Surgeons for the State of South Carolina and was a medical officer in the Confederate Army. Charleston was ransacked during the war and all of Dr. Holbrooks's papers were lost. He experienced an even greater loss, that of his beloved wife, in 1863. After the war, Dr. Holbrook retired to Massachusetts where he had spent his summers. He died in his sister's home on September 8, 1871. A month later, Dr. Holbrook's friend and famous physician-naturalist, Louis Agassiz, delivered a eulogy before the Boston Society of Natural History. He praised Dr. Holbrook saying:

> The death of Dr. Holbrook has been deeply felt by a very large circle of friends, and by those who are acquainted with the history of science during the last fifty years. But highly as he was appreciated by all to whom he was personally known, and by his scientific peers and colleagues, America does not know what she has lost in him, nor what she owed to him. A man of singularly modest nature, eluding rather than courting notice, he nevertheless compelled European recognition of American science by the accuracy and originality of his investigations. I well remember the impression made in Europe more than five and thirty years ago, by his work on the North American reptiles. Before then, the supercilious English question, so effectually answered since, "Who reads an American book?" might have been repeated in another form, "Who ever saw an American scientific work?" But Holbrook's elaborate history of American Herpetology was far and above any previous work on the same subject. In that branch of investigation Europe had at that time nothing which could compare with it.[22]

Dr. Holbrook left no children, but his legacy lives on in the magnificent works in natural history as well as in his contributions to South Carolina medical education.[23]

Dr. Edmund Ravenel was born in Charleston on December 8, 1797, a direct descendent of Rene Ravenel, the French Huguenot emigrant. He was educated in Charleston and took his medical training at the University of Pennsylvania, receiving an M.D. in 1819 with a thesis on "Dropsy." He started a private practice in Charleston and was one of the founders of the

Medical College in 1824. Ravenel was appointed to the first faculty in the chair of chemistry and pharmacy. He served as the dean from 1829 to 1834, when he retired to his country home, "The Grove," with complaints of failing health. He remained there as a planter until his return to Charleston after the War Between the States.

Dr. Ravenel spent his summers on Sullivan's Island, running a practice and, in his leisure time, collecting sea shells. His hobby of shell collecting resulted in one of the finest collections of the day. The catalogue of his collection, containing over 3,500 shells, was published in 1834 and was the first of its kind in America. The collection is still intact at The Charleston Museum. Dr. Ravenel was regarded as a pioneer of conchology in the United States and corresponded with other authorities in the field. His interests in natural history led to his role in the founding, along with other Charleston physicians and naturalists, of the Elliott Society of Natural History in 1853. At the first meeting, he was elected a vice-president and remained in that position until his death. Many papers published by Dr. Ravenel appear in the *Proceedings of the Elliott Society* as well as in the *Proceedings of the Academy of Natural Sciences*. Two medical writings were attributed to Dr. Ravenel, "The Advantages of a Sea-Shore Residence in the Treatment of Certain Diseases, and the Therapeutic Employment of Sea Water"[24] and "On the Medical Topography of St. John's, Berkeley, S. C., and its Relation to Geology."[25] Dr. Ravenel, nearly blind in his later years, died at his home in Charleston on July 27, 1870.[26]

Though the hub of scientific investigation was in Charleston, physician-naturalists were active elsewhere in the state. Robert Wilson Gibbes, a physician, paleontologist, ornithologist, historian, and publisher, was noted for his capability in many fields. Though born in Charleston on July 8, 1809, he lived most of his life in Columbia, South Carolina. After his graduation in 1827 from South Carolina College, Dr. Gibbes was elected assistant professor of chemistry, geology, and mineralogy at that institution. His medical studies continued and in 1834, he received his M.D. from the Medical College of the State of South Carolina. Resigning his professorship, he commenced private practice in Columbia. Dr. Gibbes was twice a delegate to the American Medical Association and served as president of the South Carolina Medical Association in 1857 and 1858. He acted as mayor of Columbia for two terms and from 1852-1860, owned, edited, and published a daily newspaper, the *South Carolinian*. He was also a noted historian, publishing the three volume *Documentary History of the American Revolution* [27] in 1853. Medical works included the book, *Cuba for Invalids*[28], which was published after his return from that country, where he had been recovering from respiratory difficulties.

Remarkably, Dr. Gibbes found the time to pursue his scientific interests in paleontology, geology, mineralogy, and conchology. Dr. Gibbes submitted many papers to scientific journals including the *Journal of the Academy of Natural Sciences* and *Smithsonian Contributions*. He maintained correspondence with the distinguished physician-naturalist Samuel G. Morton of Philadelphia and participated in scientific debate about the origins of man. He was nationally known for his work with fossils, many of which were found in the marl mines of the South Carolina Lowcountry. Louis Agassiz encouraged Dr. Gibbes to classify and report on his extensive collection of shark's teeth. "Monograph of the Fossil Squalidae of the United States" was, thus, published in 1848 and from his collection, six new species were identified.[29]

Dr. Gibbes, like many of his physician contemporaries, was called for service in the Confederate Army. He had held the position of surgeon general for the state of South Carolina since 1850 and was reappointed in that role during the War. Sherman's march on Columbia resulted in the loss of his prized collections of fossils, shells, stones, autographs, and coins, as well as other personal belongings. Dr. Gibbes "died full of loneliness and despair" a few months after the end of the War on October 15, 1866.[30]

Back in Charleston, another Gibbes was to be found engaged in scientific study. Lewis Reeve Gibbes was the most versatile of the 19th century physician-naturalists. He was born in Charleston on August 14, 1810, a descendant of South Carolina Governor Robert Gibbes. His early education was obtained at the Grammar School of the University of Pennsylvania in 1821 and

1822; and at Pendleton Academy in Pendleton, South Carolina from 1823 to 1827. He graduated with highest honors from South Carolina College in 1829. He began his study of medicine in Pendleton and in Charleston but in 1831, he assumed a position as a tutor in mathematics at South Carolina College. While in Columbia, he enjoyed the study of area flora and in 1835, published "A Catalogue of the Phaenogamous Plants of Columbia, S.C. and Its Vicinity,"[31] containing about 900 species. Dr. Gibbes returned to Charleston in 1835 and completed his M.D. at the Medical College of the State of South Carolina in 1836. He then spent two years studying in Paris, frequently visiting the Jardin des Plantes.

Returning to South Carolina in 1837, Dr. Gibbes never practiced medicine but ventured in a variety of other scientific endeavors. Months after his return, he was elected professor of Mathematics at the College of Charleston and stayed in that position for fifty-four years. It is said of Dr. Gibbes that "while his favorite study was astronomy, he was at home in almost every branch of modern science. The variety of his knowledge was as remarkable as its range. Natural history was a branch which he eagerly pursued, and in which he was the colleague of Agassiz, of Holbrook and, of Bachman. As an astronomer, he made many practical calculations. Next to astronomy, botany engrossed his affections. His mind possessed the range of the telescope, the accuracy of the microscope, and the variety of the kaleidoscope."[32] He was a prolific writer and published papers on many subjects, a number of which may be found in the *Proceedings of the Elliott Society of Natural History*, the organization for which Dr. Gibbes ably served as the president for 37 years.[33] He was also a member of the American Association for the Advancement of Science, acting as general secretary in 1850 when the annual meeting took place in Charleston.[34]

Dr. Gibbes and his wife, Anna Barnwell Gibbes, had nine children. He died on November 21, 1894, at his home in Charleston.[35] The wife of a Yale professor who knew and admired Dr. Gibbes said of his burial spot, "now he lies at rest under the live oaks and magnolias, and the little plants he loved and knew so well will bloom above him, and the stars he traced in their courses will shine down upon him in the earth of his own well-beloved and native land."[36]

Dr. St Julien Ravenel, a relative of Dr. Edmund Ravenel, was born in Charleston on December 15, 1819, to John Ravenel and Elizabeth Ford Ravenel. His childhood was spent in Charleston and Morristown, New Jersey, the home of his mother. Dr. J. E. Holbrook instructed young St. Julien in medicine prior to his graduation from the Medical College of the State of South Carolina in 1840. He then traveled to Philadelphia and Paris, continuing his study of medicine, before starting his private practice in Charleston in 1842. In that same year, he was elected demonstrator in anatomy at the Medical College and also became known as a skillful diagnostician.

Encouraged to pursue his scientific interests by his mentors, Holbrook and Louis Agassiz, Dr. Ravenel abandoned his medical practice in 1852 to dedicate his time to chemistry. Most of his work was performed in the field of agricultural chemistry, where he contributed greatly to improving agricultural conditions in the state. In 1856, he began producing lime from the marl found around his home at Stoney Point. South Carolina was spared from post-War commercial ruin by Dr. Ravenel's discovery of the phosphate deposits around Charleston and their potential as a source for fertilizer. His inventiveness was applied to the cause of the southern states as he designed and built the torpedo boat "Little David" in 1863 to maneuver against Federal blockaders in Charleston Harbor. Dr. Ravenel also served the Confederacy as surgeon of the 25th South Carolina Regiment and as chemist in charge of a Columbia laboratory producing medical supplies.

In the Centennial Edition of the Charleston *News and Courier*, a tribute to St. Julien Ravenel read: "Dr. Ravenel was man of rare attainments. 'With the patience and divination of genius he sought in the great laboratory of nature the secret of her creations. These, when he found, he did not hoard as a miser nor guard as a private treasure, but scattered broadcast to benefit mankind. In an age of fierce competition and greed he calmly pursued his studies and investigations, not for the sake of profit, but for the cause of science and the welfare of his fellow men.'"[37] Dr. Ravenel died on March 1, 1882, leaving his wife of 31 years, Harriet Horry Rutledge Ravenel, five daughters and four sons.[38]

The youngest of the physician-naturalists active in South Carolina just prior to the War Between the States was Francis Peyre Porcher. He was not yet born when Drs. J. E. Holbrook and Edmund Ravenel became members of the first faculty of the Medical College, but he quickly became a prominent figure in Southern botany and medicine. Dr. Porcher was born to William and Isabella Porcher in St. John's, Berkeley County, South Carolina on December 14, 1824 and was, like the Ravenels, of Huguenot descent. His future as a physician-naturalist was foretold in his ancestry. His father, William, was a physician and his mother, Isabella Peyre, herself an accomplished botanist, was the granddaughter of the famed South Carolina botanist, Thomas Walter who published *Flora Caroliniana*[39] in 1788.

Young Porcher attended Mt. Zion Academy in Winnsboro, South Carolina; then proceeded to achieve an A. B. degree from South Carolina College in 1844. He attended the Medical College of the State of South Carolina and graduated with first honor in 1847. His thesis, which was published by the faculty, was titled "A MedicoBotanical Catalogue of the Plants and Ferns of St. John's, Berkeley, South Carolina."[40] Dr. Porcher studied for two years in France and Italy where he added the languages of those countries to his knowledge of Greek and Latin.

Upon his return to Charleston in 1849, Dr. Porcher published and presented "A Sketch of the Medical Botany of South Carolina"[41] to the American Medical Association. Another report was made to the AMA in 1854 on "The Medicinal, Poisonous, and Dietetic Properties of the Cryptogamic Plants of the United States."[42] The culmination of his botanical studies was in the book, *Resources of Southern Fields and Forests, Medical, Economical, and Agricultural; Being Also a Medical Botany of the Confederate States; with Practical Information of the Useful Properties of Trees, Plants, and Shrubs.*[43] First published in 1863 at the request of the Surgeon General of the Confederate States, the work was written for "the Regimental Surgeon in the field, the Physician in his private practice, or the Planter on his estate."[44] Because of blockades, medical supplies were short both on the battlefield and in the homes of the South. Dr. Porcher's book was so enthusiastically used that after the war, a longer, revised edition was published.[45]

Dr. Porcher's expertise in botany did not overshadow his mastery of medical science. He was for two years professor of clinical medicine at the Medical College of the State of South Carolina; he was then elected chair of materia medica and therapeutics in 1874, serving in that role until 1891. He published numerous medical papers including ones on yellow fever, diseases of the heart, typhoid, and malaria. Dr. Porcher was especially skilled in performing paracentesis of the chest wall and pericardium.[46] In 1860, he was awarded a $100 prize by the South Carolina Medical Association for his essay, "Illustrations of Disease with the Microscope; Clinical Investigations, with upwards of five hundred original drawings from Nature and one hundred and ten Illustrations in Wood."[47] The War unfortunately cut short his investigations with the microscope which could have propelled him to national fame.[48]

Dr. Porcher served in many capacities on the local, state, and national levels. He, along with Dr. E. Belin Flagg started the Charleston Preparatory Medical School in 1852. He was for five years editor of the *Charleston Medical Journal and Review.* He served the Confederacy as a surgeon with the Holcombe Legion, at the Naval Hospital in Norfolk, Virginia, and at the South Carolina Hospital in Petersburg, Virginia. In 1872, Dr. Porcher was elected president of the South Carolina Medical Association and, in 1879, became vice-president of the American Medical Association. He was one of ten Americans invited to attend the 1890 Tenth International Medical Congress in Berlin. An active member and founding curator of the Elliott Society of Natural History, he was selected a vice-president in 1879. He was awarded an honorary LL. D. from the University of South Carolina in 1891.

Dr. Porcher was twice married, to Virginia Leigh in 1855 and, after her death in 1866, to Margaret Ward. He had five children from the first marriage and four from the second. Despite a long illness, Dr. Porcher's mind remained keen until his death November 19, 1895, following a paralytic stroke. Dr. Porcher was loved and admired in medical, natural historical, and literary circles. His achievements and contributions in those areas place him among the most notable of the South Carolina physician-naturalists, a breed that died with him.[49]

Though not a South Carolinian, Louis Agassiz was a close friend and mentor to many of the physician-naturalists in South Carolina. Born in Switzerland in 1807, Dr. Agassiz was from his youth fascinated with many aspects of natural history. He trained at Zurich University, Heidelberg, and Munich University where he completed a Ph.D. in natural history in 1829, followed by an M.D. in 1830. By the age of thirty, he was friend and correspondent with many of the great naturalists of the day, including, Cuvier, Humboldt, and Lyell, and had achieved international recognition for his work in comparative zoology, paleontology, and geology. Through his friendship with Humboldt, Dr. Agassiz received a grant from Frederick William, IV, King of Prussia to travel to the United States to study the natural history of the country.

Upon his arrival, Dr. Agassiz embarked on a lecture tour that brought him to Charleston in November and December of 1847. He ultimately settled in Boston where he was appointed to the chair of Zoology and Geology at Harvard, University. As a popular lecturer and tireless researcher, he greatly influenced American natural history. Dr. Agassiz's persuasive abilities enabled him to raise funds necessary to organize the Museum of Comparative Zoology at Harvard which today bears his name. He again returned to Charleston in the spring of 1849 to lecture on glaciers.

Dr. Agassiz's connection with the South Carolina physician-naturalists deepened in 1850, when the American Association for the Advancement of Science met in Charleston. Papers were presented by Drs. J. E. Holbrook, Edmund Ravenel, St. Julien Ravenel, L. R. Gibbes, and R. W. Gibbes, as well as five by Dr. Agassiz.[50] It was at this time that he encouraged the formation of a museum of natural history based on the old museum that, at that time, was housed at the Medical College. His high regard for the Charleston scientific community and the friendships formed at the 1850 meeting, were surely instrumental in Dr. Agassiz's return to Charleston the following year.

For two winters, in 1851-52 and 1852-53, Dr. Agassiz lectured both at the Medical College of South Carolina and in the Charleston community. His appointment as a professor of comparative anatomy excited the faculty and the lectures in both realms were well attended. He continued his research in natural history, living and operating a laboratory on Sullivan's Island. Dr. Agassiz's wife, Elizabeth Cary Agassiz, said of their home on Sullivan's Island, "There could hardly be a more favorable position for a naturalist, and there, in the midst of their specimens, Agassiz and his band of workers could constantly be found. His studies here were of the greater interest to him because they connected themselves with his previous researches, not only on the fishes, but also upon the lower marine animals of the coast of New England and of the Florida reefs; so that he had now a basis for comparison of the fauna along the whole Atlantic coast of the United States."[51] During the second winter term, Dr. Agassiz became ill while spending Christmas at "Hollow Tree," the home of Dr. and Mrs. Holbrook. He convalesced there for eight weeks under the care of Dr. St. Julien Ravenel. He resigned his position at the Medical College before returning north in the spring of 1853. Though he had intended to establish a coastal research station in South Carolina, his delicate state of health and the demands of his work in Boston prevented his return.

Dr. Agassiz's time in Charleston, though short, no doubt encouraged those South Carolinians interested in natural history and lent credibility to the good work being done there. It is thought that he was a major stimulus for the organization of the Elliott Society of Natural History which took place soon after his departure in 1853.[52] His work in natural history continued with the publication of the four volume *Contributions to the Natural History of the United States of America* [53] from 1857-62. He died in Cambridge, Massachusetts on December 14, 1873.[54]

Two South Carolina naturalists of note that were not physicians, but were actively involved with the physician-naturalist group in the mid-

1800's were John Bachman and Henry William Ravenel. Bachman was born in New York in 1790 and educated at Williams College until his withdrawal during his senior year due to illness. In 1815, he became the pastor at St. John's Lutheran Church in Charleston and remained there until his death. From his youth, Bachman had collected and admired plants, birds, and animals. In 1831, Bachman befriended John James Audubon, who was then making collections for his *Birds of America.* Their very close relationship culminated in not only the great *Viviparous Quadrupeds of North America*[55], which they jointly authored, but also two marriages, those of Bachman's two daughters to Audubon's two sons. It was through Bachman that many of the physician-naturalists in South Carolina became acquainted with Audubon.

Bachman's scientific endeavors resulted in works such as, *Experiments Made on the Habits of Vultures Inhabiting Carolina*[56] and *Catalogue of Phenogamous Plants and Ferns Growing in the Vicinity of Charleston, S.C.*,[57] both published in 1834, and in 1837, *Monograph on the Hares of America*[58]. Bachman was deeply involved in the debates over human origins. He wrote numerous books and articles arguing against scientists such as Louis Agassiz that blacks and whites had a common ancestry and in 1850, he published *The Doctrine of Unity of the Human Race Examined on the Principles of Science.*[59] Bachman was held in high regard among the Charleston naturalists as evidenced by his election as the first president of the Elliott Society of Natural History in 1853. He resigned after three years in office due to poor health. Bachman died in Charleston on February 24, 1874.[60]

Henry William Ravenel, the son of St. John's Parish physician, Henry Ravenel, became one of the South's foremost botanists in the years surrounding the War Between the States. He was born on May 19, 1814, and his childhood was spent at his family's plantation, Pooshee. After attending the Pineville Academy, he studied at South Carolina College, graduating in December 1832. It is recorded in his journal that, "it had been my wish to study medicine as a profession, but my father advised so strongly against it (as too laborious and liable to exposure for what he thought my weak constitution) that I was reluctantly obliged to give it up."[61] Ravenel instead became a planter and devoted his spare time to the study of plants, with particular attention given to lichen, mosses, algae, and fungi. *Fungi Caroliniani Exsiccati: Fungi of Carolina Illustrated by Natural Specimens of the Species,*[62] was published from 1852-1860 in five "fascicles," and won him international acclaim. Between 1878 and 1882, he expanded the work, coauthoring *Fungi Americani Exciccati* [63] in eight volumes, with Prof. Mordecai C. Cooke of London. At the 1850 meeting of the American Association for the Advancement of Science, Ravenel delivered the first paper entitled, "A Catalogue of the Natural Orders of Plants, Inhabiting the Vicinity of the Santee Canal, S.C., as Represented by Genera and Species; with Observations on the Meteorological and Topographical Conditions of that Section of the Country."[64]

Though he moved to Aiken, S. C. in 1853, he remained intimate with many Charleston naturalists, F. P. Porcher, L. R. Gibbes, Edmund Ravenel, and John Bachman among them. Shortly after his move, he was elected as a curator of the Elliott Society of Natural History at its inaugural meeting. Ravenel maintained constant correspondence with friends in Charleston as well as authorities in the field of mycology in New England and Europe. Ravenel continued his botanical work in Aiken and served as botanist to the Department of Agriculture of South Carolina until his death on July 17, 1887.[65]

The men introduced above lived during an exciting time in American science. The natural history of the young nation had much to offer the eager scientist, whether he be professor, planter, physician or preacher. The physician-naturalists living in South Carolina just prior to and after the War Between the States were in a unique position. Charleston had become a major center for the study of natural history.[66] The town was not so large, though, that men purely interested in research could maintain a career. This allowed the physicians, the most highly trained scientists in the area, to make great contributions in both medicine and natural history.

South Carolina medicine benefitted from the efforts of a number of the physician-naturalists, the most lasting contribution being the organization of the Medical College of the State of South Carolina. Of the seven members of the original faculty, three had gained reputations as accomplished naturalists as well as physicians. Dr. John. E. Holbrook was the first professor of anatomy and a herpetologist, Dr. Edmund Ravenel, professor of chemistry and pharmacy and a conchologist, and Dr. Stephen Elliott, botanist and professor of natural history and botany. Drs. T. G. Prioleau, James Ramsay, Samuel Henry Dickson, and Henry R. Frost complete the seven. Aspiring physicians not only learned to care for the sick, but they gained an appreciation for the world around them. Many students from the Medical College retained a strong and active interest in natural history after their graduation. Drs. F. Peyre Porcher, L. R. Gibbes, R. W. Gibbes, and J. H. Mellichamp are among the most well-known in this group.

In their quest for attaining and disseminating knowledge, the physicians of South Carolina began subscribing to, writing for, and editing journals. Johnson points out that "in the rural South, with a population too scattered to support purely scientific journals, the medical publications, to a certain extent quite consciously, attempted to supply the lack and welcomed contributions on subjects of natural science only remotely, or not at all, connected with medicine."[67] The most important South Carolina journal of the time was *The Southern Journal of Medicine and Pharmacy,* started in 1846 and, in 1848, becoming *The Charleston Medical Journal and Review.* South Carolina physician-naturalists also contributed to similar journals throughout the United States.[68]

Another medium for the sharing of ideas and discoveries was through membership in local, national, and international societies. Originally named the Antiquarian Society, the Literary and Philosophical Society of South Carolina was started in Charleston in 1813 and within five years, there were 138 members. Collections were made through this group which became the nucleus for The Charleston Museum. The Society experienced a decline in participation and waned to extinction in the early 1840's.[69] Enthusiasm for the natural sciences again peaked in Charleston in 1850 when the American Association for the Advancement of Science met there. In 1853, the Elliott Society of Natural History was organized. At the opening meeting on November 1, Dr. Edmund Ravenel was elected a vice president and of the thirteen curators appointed, ten were physicians.[70] These same physicians were active in national and international societies as well.

The great strides made in natural history from the colonial period had led to specialization within the many branches by the 1840's. The exploring naturalist was replaced by the classifying naturalist, which included most of the physician-naturalists. Further specialization, such as that by Henry William Ravenel in the field of mycology, left little room for the physician who pursued the study of natural history in his leisure time. As pharmacy became a recognized field, botany ceased to be taught in the medical schools, denying young physicians that exposure to the natural world.[71]

The era of the physician-naturalist in South Carolina received a fatal blow with the War Between the States. There was no time for the recreational study of flora and fauna; all efforts were directed toward the cause of the Confederacy. Drs. J. E. Holbrook, R. W. Gibbes, F. P. Porcher, and St. J. Ravenel served as surgeons in the Confederate Army, among other contributions. For the Elliott Society of Natural History and Drs. Holbrook and R. W. Gibbes, years of research and collection were lost as Union troops ravaged the South.[72]

Those illustrated here are only the better known examples of physicians who were fascinated with the beauty and diversity of their natural surroundings. The period between 1835 and 1860, produced a group of physicians in South Carolina who participated in an exciting era of discovery and description of American natural history. These physician-naturalists applied their background in science to the study of natural history and, in some cases, became world-renowned for their avocation. ❑

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SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

Dana Kickey, Editor
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January 1999

MEDICARE UPDATE

CHANGES IN MEDICARE FOR 1999

Beneficiary Coinsurance, Deductible, and Premiums
Medicare Part A Hospital

Deductible	$768 per benefit period (first 60 days of hospital confinement)
Coinsurance	$192 a day for the 61st day through the 90the day of each benefit period $384 a day for longer than 90 days

Medicare Part A Skilled Nursing Facility

Coinsurance	$96.00 a day for the 21st through 100th day of each benefit period

Medicare Part B
The Part B deductible remains unchanged from 1998.

Deductible:	$100.00
Monthly Premium:	$45.50

Physician Interpretation of a Pap Smear

For services furnished on or after January 1, 1999, separate payment is allowed for the physician's interpretation of a pap smear for any patient as long as: (1) The laboratory screening personnel suspect an abnormality; and (2) The physician reviews and interprets the pap smear.

Conditions for Payment of Medical Direction for Anesthesia

There are seven requirements that a physician must satisfy in order for payment to be made for the physician's medical direction of qualified individuals performing anesthesia case(s). PGBA is making a technical clarification in one of the medical direction requirements.

One of the current requirements is that the physician must participate in the most demanding procedures of the anesthesia plan, including induction and emergence. The current requirement was included at a time when general anesthesia was the usual mode of practice for anesthesia services. However, since that time, other types of anesthesia care, such as regional anesthetics and monitored anesthesia care have become more common. The clarification is that the physician must participate in the most demanding procedures of the anesthesia plan, including, if applicable, induction and emergence.

Nonphysician Practitioners (Nurse Practitioners, Clinical Nurse Specialists and Physician Assistants)

The Balanced Budget Act of 1997 (BBA) provides for expanded coverage of nurse practitioner, clinical nurse specialist and physician assistant services. These provisions have already been implemented. This proposed rule changes the regulation's text to conform to the BBA provisions. PGBA is proposing a revised definition of physician collaboration for nurse practitioners and clinical nurse specialists, and to modify the qualifications for nonphysician practitioners, which would allow orthopedic physician assistants to receive payment.

Payment for Outpatient Rehabilitation Services

The Balanced Budget Act changed Medicare policy for outpatient rehabilitation services. This regulation implements the following changes required by BBA:

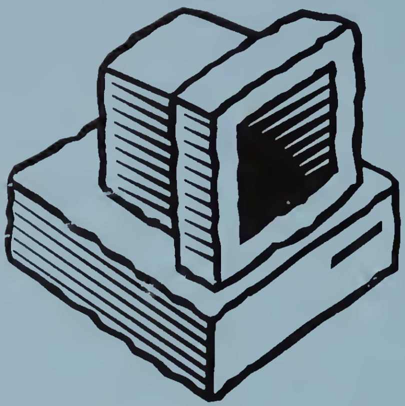
* Outpatient rehabilitation services will be paid using the physician fee schedule beginning January 1, 1999. This provision will apply to outpatient physical therapy, occupational therapy, and speech-language pathology services covered under Part B and furnished by: rehabilitation agencies, public health agencies, clinics, skilled nursing facilities (to individuals who are not receiving Part A benefits), home health agencies (to individuals who are not receiving home health benefits), hospitals, and other entities under an arrangement with any of these entities.

* Beginning January 1, 1999, two annual per beneficiary limits of $1,500 will be used; one limit for outpa-

continued, page 4

ESTABLISHING AN INTERNET CONNECTION

Part I - Choosing an ISP



If you are ready to begin surfing the Internet and utilizing e-mail, the first step is establishing your Internet connection. You will need to choose a service provider (the company providing the connection), software, and the type of connection that will best suit the needs of your practice. In this article, we will discuss choosing a service provider.

There are two types of service providers, an Internet service provider and an online service provider. An Internet service provider (ISP) gives you the telephone access and software you need to connect to the Internet, along with some technical help. Many ISPs also include an electronic-mail account. You can choose from local or national ISPs. Some examples of ISPs are InfoAvenue and MindSpring. An online service provider connects you to the Internet, too, but also offers special features and content. They also provide access to your e-mail, the World Wide Web, and newsgroups. One example of an online service provider is America Online. Some factors to consider in choosing your service provider are:

- **Local or national.** A local ISP may provide lower rates or other benefits such as having a local office to deal with. However, the access number may be a local number only. If you dial in from any other area, you may incur long distance charges. A national ISP or online service provider may cost a little more but will usually provide toll-free support and local or toll-free access in cities you may travel to.
- **Access.** How often will you actually get through, rather than get a busy signal, when you dial in? (Don't just rely on a customer service representative for this information. Try calling the connection number several times at different times of the day, and see what results you get.)
- **Technical support and customer service.** Are there knowledgeable, friendly technical support and customer service people available whenever you need them? Is the telephone call toll-free? How long will you have to wait on hold? Can you get technical support and customer service online? Is support available 24 hours a day, seven days a week?
- **E-mail.** Does the service provide an e-mail account, and can you access your account through another ISP if you're outside a local ISP's area?
- **Price.** Many services offer different monthly subscriptions, including unlimited access for a flat monthly fee and limited hours for a flat monthly fee with additional hours, as needed, for an extra charge. When you compare ISP and online service provider prices, consider the factors above as well as the special features and content that the online service providers offer. Don't forget to check out options for business packages. Prices and packages vary widely for commercial accounts.
- **Types of connections available.** Does the ISP provide access for faster modems or ISDN connectivity? Some ISPs even provide dedicated access for businesses in need of a fast, full-time connection to the Internet.

After analyzing the needs of your practice, contact several ISPs to compare prices and features. Then talk with a representative and explain your needs. They will provide insight on the type of package that best suits your needs and your budget.

Other factors to consider in establishing your Internet connection are software and the type of physical connection that will best suit the needs of your practice. We will consider these issues in our next article in this series.

DOES YOUR DOCUMENTATION SUPPORT YOUR CODING?

PMSI's Documentation Review Service will come to your office and review your medical records to help you determine whether the documentation in your charts supports your coding decisions. This kind of chart review is key to any effective compliance plan and will only become more important with the new E & M guidelines being introduced. If there is a problem, let us help you discover and correct it before someone else does. For more information, call Anne Harvin Gavin at (800) 327-1021, extension 260.

MEDICAID UPDATE

Prescription Coverage Changes

Effective January 1, 1999, Medicaid-eligible adults (recipients 21 years of age and older) were eligible to receive four prescriptions per month. This represents an increase of one prescription per month from the prior limit of three prescriptions per adult per month All other coverage limitations continue to apply.

As a reminder, effective July 1, 1998, Medicaid-eligible recipients from birth through the month of their 21st birthday became eligible to receive an unlimited number of prescriptions per month.

Questions regarding this notice should be directed to the DHHS Department of Pharmacy Services at (803) 253-6179.

PEP and HOP Workshops

The Department of Health and Human Services will conduct a Physician Enhanced Program (PEP) and Healthy Options Program (HOP) workshop on February 10, 1999, in Charleston. The workshop will be held at Bons Secours - St. Francis Hospital and will be tailored for potential PEP and HOP providers. Interested parties should contact their program manager in the Department of Physician Services at (803) 253-6134 for additional information.

EPSDT Changes

The Medicaid Program, as part of Federal requirement, must develop and maintain a program of Early and Periodic Screening, Diagnosis and Treatment (EPSDT) for Medicaid eligible children. EPSDT is the preventative, well child screening program in South Carolina. In response to concerns and requests from physicians and other EPSDT providers, the Department of Health and Human Services (DHHS) is offering the following options in the EPSDT program effective with dates of service on or after December 1, 1998.

1. Providers will be able to bill EPSDT services and immunizations on the HCFA 1500 using CPT codes. Providers who are set up for electronic billing may bill using the electronic billing system when using these CPT codes. Providers using the HCFA 1500 will bill under the Medicaid provider numbers they currently use for billing the HCFA 1500.
2. Providers using the HCFA 1500 will be responsible for handling their own EPSDT scheduling of patients in their practice.
3. Use of the 1724 form for billing purposes is no longer required. The 1724 form will be phased out and will not be accepted after June 30, 1999. Those providers who continue to use the 1724 form must use their EPSDT provider number and be EPSDT providers.
4. The DSS county office will continue to be available to schedule transportation services and assist in referrals to other providers.

If you have questions concerning the program changes, desire to begin providing EPSDT services, or need assistance in how to bill using the HCFA 1500, please contact your program manager at (803) 253-6134.

SCMA WORKSHOPS

PERSONNEL MANAGEMENT IN THE PHYSICIAN'S OFFICE

February 11, 1999

Practice managers find it increasingly difficult to meet the demands of managed care and still continue to find ways to reduce overhead and cut expenses. In addition to these challenges, managers are expected to increase staff efficiency and ensure patient satisfaction. This workshop is designed to help the manager resolve many of the problems of the day-to-day demands of overseeing the practice and to provide more time for those responsibilities that make the staff more efficient, effective, and service oriented. Register by February 1, 1999.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

CHART AUDITING

February 24, 1999

This full day seminar will address chart auditing as a mechanism for compliance and improved reimbursement within your practice. The attendees will receive useful information that will aid them in performing chart audits for their practice. Register by February 15, 1999.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, ext. 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

Medicare Update, continued from pg. 1

tient physical therapy services (including speech-language pathology services), and a separate limit for outpatient occupational therapy services. These limits will include all outpatient therapy services except for services furnished by hospital outpatient departments. The discipline of the therapist furnishing the service will determine which limit the service applies toward.

Payment for Drugs and Biologicals

BBA limited Medicare payment for drugs and biologicals not paid on a cost or prospective payment basis to 95 percent of average wholesale price (AWP). This proposed rule changes the regulation's text to conform to the BBA's provisions.

In addition, because of concerns raised by the Office of the Inspector General combined with PGBA's belief that it is the fiscally responsible thing to do, PGBA proposes to revise the method for calculating the median AWP for multiple-source drugs to equal the lower of the median price of the generic AWPs or the lowest brand name AWP.

CAPSULES

Frank J. Martin, M. D., a family practitioner from Hopkins; ***Peter C. Gazes, M. D.***, a Charleston cardiologist; and ***Vernon E. Merchant, M. D.***, a surgeon from Anderson were awarded the Order of the Palmetto.

PHYSICIANS CARE NETWORK UPDATE

PCN continues to grow. Currently, there are 6,829 participating physicians, 713 participating ancillary providers and 87 participating hospitals. **PCN has 105 contracted groups with 53,536 covered lives. Information will be provided as contracts are received.**

NEW GROUPS:

- Philadelphia American Life; Statewide; effective 1/1/99; Access/Peer Review
- SC Student Loan Corporation; Columbia; effective 10/1/98; Access/Peer Review
- First Continental; Statewide; effective 10/1/98; Access/Utilization Review

Please remember to notify PCN when you have a tax ID number change, address change, or when you add or terminate a physician from your group. Early notification will ensure provider directory accuracy and prevent claims payment delays.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, PCN at (803) 798-6207, extension 257 or statewide at (800) 327-1021. You can also send an e-mail message to cindy@scmanet.org.

PHYSICIAN RECOGNITION AWARDS

The following SCMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned.

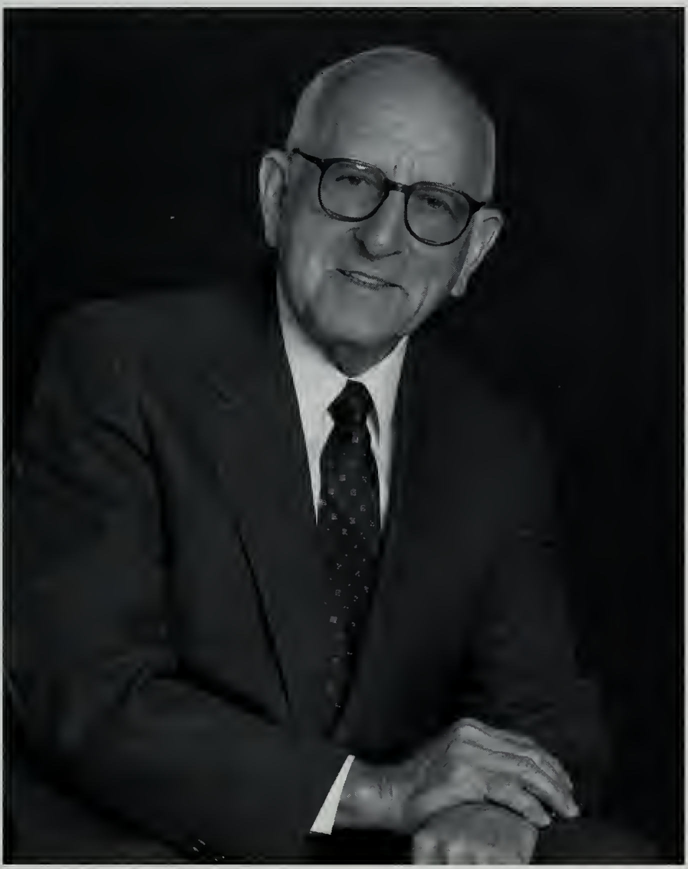
Einar W. Anderson, M. D.
Naseeb B. Baroody, Jr., M. D.
Julio C. Barredo, M. D.
Larry D. Bartel, M. D.
William A. Collins, M. D.
Woodward R. Dixon, M. D.
James L. Floyd, M. D.
Donald P. Hurley, M. D.
Henry P. Leis, M. D.
Carl S. Li, M. D.
Harold E. Shaw, M. D.
James S. Ulmer, M. D.
Leo L. Walker, M. D.
Randy D. Watson, M. D.

MARK YOUR CALENDAR

The SCMA's Annual Meeting and Scientific Assembly is scheduled for April 29-May 2, 1999, at Charleston Place Hotel, Charleston, South Carolina.

Editorials

JIM KNIGHT AND THE MORAL NATURE OF MEDICINE



James Allen Knight, MD (Born October 20, 1918, St. George, SC; Died July 17, 1998, New Orleans, LA): minister, physician, educator, humanitarian.

In his marvelous little book, *Time and the Art of Living*, Robert Grudin observes that those who contribute the most to human progress seldom dazzle us at first meeting. No, they come across as ordinary folks like you and me. They made their marks by combining ideals with focused hard work, thereby reminding us that we can do the same if we're willing to pay the price.[1]

Several years ago, I met an unassuming man named Jim Knight at a luncheon. He told me that he was from St. George, South Carolina. We corresponded briefly, then lost touch. It was only later that I realized how remarkable he was. Before medical school he was an ordained minister. During a long career in academic psychiatry he wrote nine books and more than 100 papers, was founding dean of a medical school, and became a great humanist and humanitarian. My one regret is that, expecting to see him again, I never dropped a note to let him know how much I enjoyed a paper he wrote in his eighth decade entitled "Moral Growth in Medical Students."[2]

In that paper, Jim Knight identified eight tasks that apply not only to medical students but also to physicians at any level, and on a daily basis. These are worth reviewing briefly.

- *Clarify your motivation for being a doctor.* Nurture a personal identity concerning the commitment to relieve suffering. As a Navy chaplain Jim was in the first group to enter Nagasaki to help evacuate American prisoners shortly after the Japanese surrendered at the close of World War II. The just-bombed city was silent. On the edge of Nagasaki, Jim saw a church frame with its steeple still standing. His inner voice heard the steeple proclaiming: "I am the God of Abraham and of Isaac, and this shall be a light to lighten the Gentiles and for the glory of my people Israel. From this day forward, all shall serve to silence suffering, for only then will earth be fair and all my people whole." Then and there, Jim Knight resolved to go to medical school.
- *Balance competence and compassion.* Competence is the physician's penultimate ethical precept (the ultimate is integrity). Medical school fosters a state of mind characterized as "detached concern." Jim expressed optimism that the pendulum now swings away toward compassion, seen as "the willingness and the capacity of physicians to share in the pain and anguish of those who seek their care, to understand what sickness means to

those people, and to manifest a readiness to help." He quoted an ancient proverb to the effect that a sorrow shared is a sorrow halved. Our conditioned reflex should be to ask inwardly of each patient: What is the meaning of illness in this patient's life at this particular time?

- *Develop a tolerance for uncertainty and ambiguity.* Medicine will always be an inexact science despite public expectations that it be otherwise. We inevitably grapple with the anxieties of not comprehending to the fullest extent the complex interactions between and among the patient's cells, fluids, and tissues and the external environment. Pressure from within and without to use technology excessively must be resisted. We must strive to be an educated persons in the broader sense, with "the courage to live with doubt, to accept with humility the fact that the best one can do is to gather approximate evidence which points in the direction of approximate truths."
- *Learn and practice the art of laughter.* Jim Knight observed that laughter is essential to the study and practice of medicine. He and a group of friends concluded that there were two times when they laughed the most: in medical school and in war. Laughter ranks with humor, altruism, and sublimation as a healthy defense mechanism against the stress of daily life. Share. Laughter is a key part of the art of medicine. Jim goes on to note that if young physicians "fail to develop in this area, the moral side of their lives will lack an enriching and rewarding component for themselves and their patients." Laughter helps us take ourselves less seriously.
- *Work through your feelings about death and finitude.* With his dual training in medicine and religion, Jim observed that medical school seldom emphasizes an interrelationship familiar to all theologians and philosophers: Our own anticipation of death (albeit subconscious most of the time) colors our interactions with the dying. Each individual must struggle with the issues raised by death and finitude. Jim recommended familiarity with great literature such as Tolstoy's *The Death of Ivan Ilyich* and Thomas Mann's *The Magic Mountain.* Physicians are no exception to this truism: "It is only in daring to accept one's death as a companion that a person may really possess life." We must work through our own feelings about death so that we will be comfortable with the dying.
- *Find the path to the wounded-healer.* The notion of "the wounded healer"—not to be confused with the notion of the impaired physician—resonates throughout the separate histories of medicine and religion. The prototype is Asklepios, God of healing in Greek mythology, who was wounded before or at birth. Askleipios was entrusted to Chiron, who, half-human and half-divine, had an incurable wound inflicted by Hercules. Chiron passed on the Asklepios the art of healing. As healers we are wounded and vulnerable ourselves. We are in a sense fellow-patients. The true healer remains aware of the mystery relating to "a knowledge of the wound."
- *Become skilled in ethical reflection.* We must skillfully examine our own lives in the context of caring for others. We must know the art of ethical reflection. Failure to master ethical reflection leaves us "strangely crippled in the moral and spiritual dimensions" of medicine and life. Skill at ethical reflection requires the ability to understand opposing viewpoints. Indeed, we should practice debating both sides of a dilemma. It was perhaps to this end that one of Jim Knight's last activities was the development of a humanities program for medical students and young physicians. He encouraged the use of rounds—ward rounds, grand rounds, and "ethics rounds"—as forums for teaching and modeling ethical reflection and decision-making.
- *For doctoring the sick, obtain a knowledge of the soul.* The frequent admonitions to "know thyself" are seldom honored with true commitment. Yet the core of medicine, Jim wrote, "tends toward the sacred, . . . [and] even may be sacred." Jim Knight clearly saw medicine as a form of ministry:

> Since the earliest days of medical practice, physicians have usually recognized that there is a power grater than themselves at work in the recovery of their patients. Whether this power is called God nor nature or homeostasis is not important, for it is the recognition and acknowledgment of such a power that leads to the attitude of reverence in our work and in all of our relationships with human life. Since we need a fixed point of reference, a final cause and a final answer by which we orient our human efforts, we can find it in this

> greater wisdom which controls the complex reactions of our psyche, soma, and soul.

Wanting to know more about Jim, I called his widow, Dr. Sally Knight, at her home in New Orleans. She told me that Jim's health had begun to deteriorate the year after I met him. Although he had never smoked, he died of lung cancer. She believed that his lung cancer was due to his heavy exposure to the nuclear fallout of Nagasaki. If this were indeed the case, then his career in medicine—from the moment of commitment to the last hour—strikingly epitomized the metaphor of "wounded-healer" for the same bomb that changed his life ultimately killed him. Our lives come full circle.

James Allen Knight, M.D., of St. George, South Carolina: minister, physician, psychiatrist, educator, author, humanist, humanitarian.

Somewhere in Texas this spring, a ceremony will be held in his honor and a tree planted in his memory.

—CSB

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PROLONGING PREGNANCY AND PREVENTING PREMATURE BIRTH: ELUSIVE GOALS FOR PERINATAL HEALTH CARE PROVIDERS

"It's Preterm Birth, Stupid"
—Paraphrasing President Clinton's campaign statements about the economy

In the last decade, South Carolina's infant mortality rate has been steadily falling while prematurity rate and associated medical complications and cost of intensive care for premature infants are rising. According to the 1998 "Kids Count"[1] report, between 1985 and 1995, there was a 32 percent decrease in infant mortality rate and eight percent increase in prematurity rate. Moreover, in national composite health care rankings for 1990 through 1998, this state ranks 48th among the 50 states in the union.

Persistent decline in infant mortality is translated into sustaining the lives of increasingly more immature infants. The result is the addition to society of many infants with diseases related to prematurity par excellence. Included in those diseases are chronic lung disease, retinopathy of prematurity, growth and development delay, cerebral palsy, birth defects, and hearing deficits.

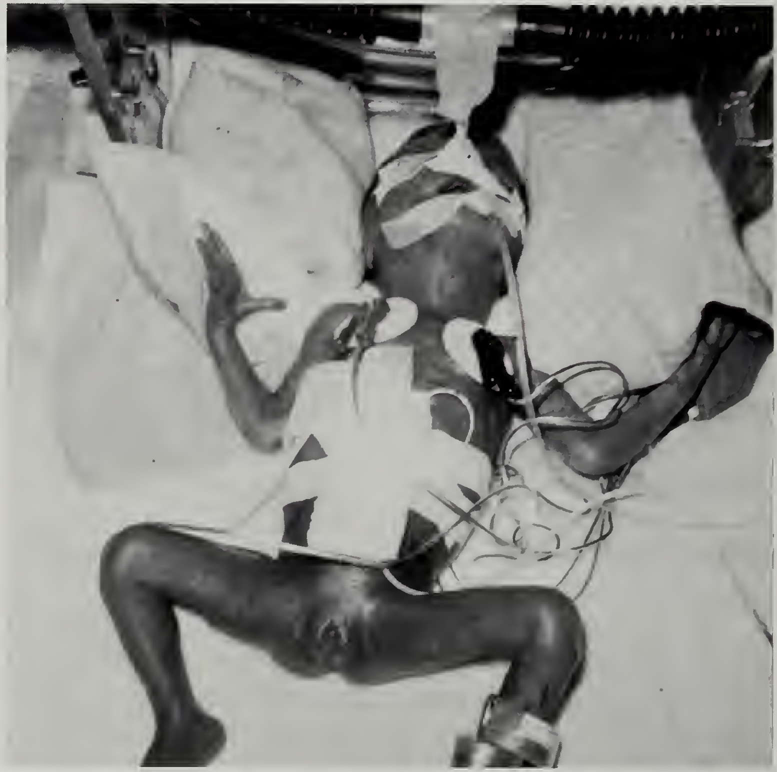
Figure 1. A 520 g infant. Over 50 percent survival but at what medical, psychological, and financial cost?

Although survival in the smallest infants (Fig. 1) improved dramatically during the first few days of life, there is a significant risk for late death for the smallest of these infants.[2] Overall, preterm birth has become the single most common cause of poor outcome for progeny. In addition, with substantial improvement in technology to save the smallest infant with shortest gestation, it is becoming more feasible and challenging to push back the frontiers of viability for very-low-birth-weight infants. Thus, it is predicted that in the first few years of the next century, it will be possible to save the life of infants with gestation as low as 19 weeks.

Statistics also show another correlation: prematurity and its associated conditions dovetails the financial burden on parents and society at large. Nationally, the total NICU resource use in 1995 is estimated at $4 billion and rising.[3] Thus, caring for NICU patient is one of the most expensive care in hospitals.

The factors predisposing pregnant women into premature labor remain undefined. However, epidemiologic studies have shown that over 50 percent of the risk factors for impending preterm delivery are well known and potentially preventable. Among these factors are previous preterm delivery, multiple gestation, uterine structural abnormalities, teenage pregnancy, and conditions

PREVENTION OF RISK FACTORS IN PREMATURE BIRTH

Risk Factors	*Prevention*
High risk pregnancy	Enhanced prenatal care, risk assessment
Psychological problems	Psychological support and counseling
Tobacco, drugs and alcohol	Programs for cessation of use and abuse of tobacco, drugs, and alcohol
Multiple gestation	Patient education
Teenage pregnancy	Patient education, family, and community educational programs to prevent teen pregnancy

Table 1

TREATABLE RISK FACTORS ASSOCIATED WITH PRETERM LABOR AND DELIVERY

Risk Factors	*Treatment*
Bacterial vaginosis	A combination of metronidazole and erythromycin
Incompetent cervix	cerclage
Malnutrition	protein, caloric, and vitamin supplementation
Sexually transmitted diseases	Appropriate antibiotics
Impending preterm delivery	Tocolytic drugs
Preterm rupture of membranes	Prophylactic antibiotics

Table 2

associated with high risk pregnancy (Table 1).

Furthermore, recognizable and potentially treatable conditions associated with threatening preterm labor are malnutrition, prenatal and perinatal infections, drug abuse, smoking, incompetent cervix, preterm rupture of membranes, bacterial vaginosis, impending preterm delivery, and sexually transmitted diseases (Table 2).

Thus, early and aggressive interventions to prevent premature birth and prolong gestation include patient education to detect signs of preterm labor, bed rest, liberal provision of prenatal care, adequate hydration and bed rest, balanced diet, tocolytic therapy, home uterine-activity monitoring, and massive educational programs for cessation of tobacco, drug, and alcohol during pregnancy. In a recent report[4], implementing psychological support programs for women with symptoms of preterm labor appears to reduce the risk of preterm delivery by 50 percent.

With up to 80 percent of early preterm births linked to intrauterine infection that precedes the rupture of the membrane[5], it seems logical that the control of maternal infections may be one of the most promising methods in preventing premature delivery. Prominent among intrauterine bacterial infections is bacterial vaginosis, a polymicrobial overgrowth of predominantly anaerobic bacteria that is associated with 1.5 to three times risk of spontaneous preterm birth.[6]

From antiquity to the present time, medicine has been on the march with physicians being in the forefront in the continuing advancement of medical knowledge.

South Carolina maintains its pride as a state where the massive childhood immunization program is one of the best in the country. But, the unacceptable persistent high prematurity rate is of concern to society and all health care providers in the state and the country at large. The verdict on the U.S. and South Carolina's prematurity preventive programs is in—it is a roaring disappointment.

Necessity, it is said, is the mother of invention. What is needed are safe methods that effectively reduce prematurity rates in South Carolina.

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Sami B. Elhassani, M. D.
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On the Cover:

PHYSICIAN / NATURALISTS

As an introduction to and recommendation of Dr. Whitehead's article in this issue of *The Journal,* pictured on the cover is an illustration from John Edwards Holbrook's *Ichthyology of South Carolina* which was published in 1855. Dr. Holbrook's works are tangible examples of the contributions to natural history furnished by the people featured. Below is an illustration from Dr. Holbrook's *North American Herpetology; or, a Description of the Reptiles Inhabiting the United States* which was published in five volumes in 1842.

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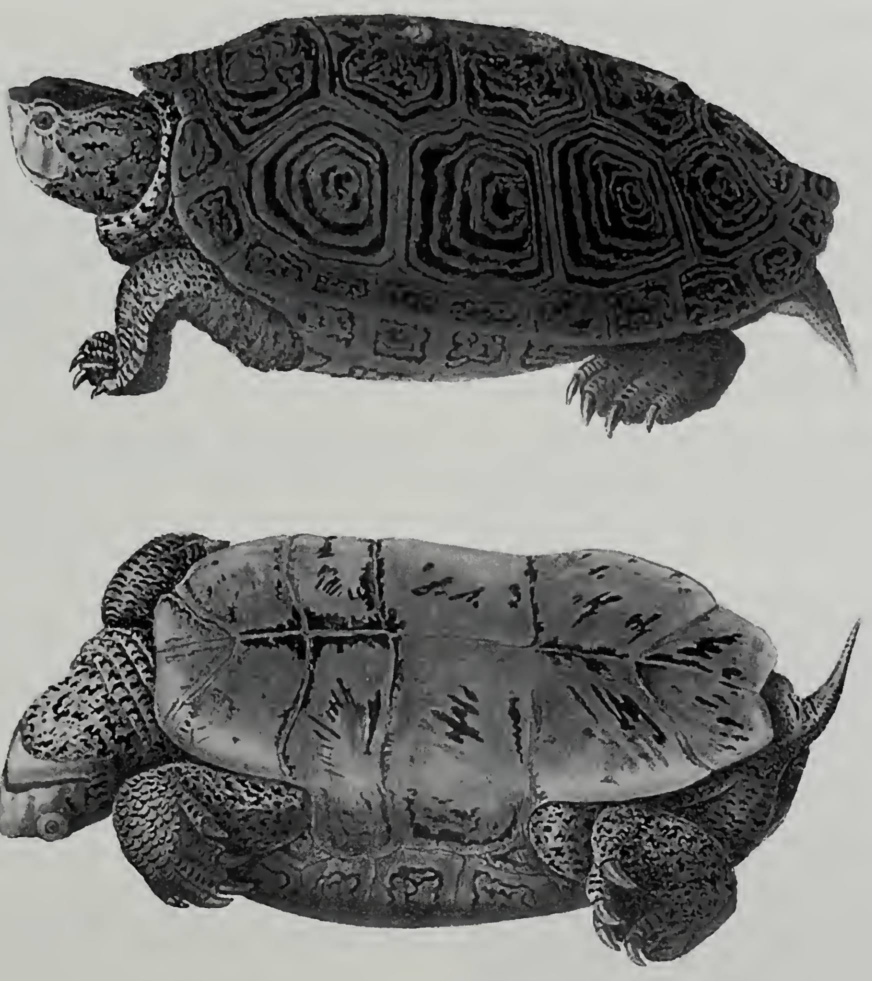
Curator, Waring Historical Library



Emys terrapin

Alliance Page

SCHOLARSHIPS

The high cost of medical education and its effect on families as they begin their medical careers has touched us all. Many of us have been recipients of scholarships thanks to the generosity of others. Last year, the Alliance contributed over $35,000 to medical education and research through the AMA Foundation. In addition, we contribute through SCIMER to medical education in South Carolina. Those of us who have had the opportunity to be involved in the scholarship process are overwhelmed by the need and worthiness of each student who applies for a scholarship. We have also received grateful letters from students thanking us for being there, enabling them to finish their education. As a result of this experience, the Alliance has decided to find a way to increase what we can give for scholarships and develop a way to enable it to continue to grow.

In May, the Alliance decided to produce a cookbook. We asked each of our 20 counties to donate as many recipes as they had State Alliance members. Each county that met this quota would receive 30 percent of the profit made on the books they sold for their own scholarship benefit within their county. We had hoped that we would receive about 700 recipes, which represents half of our membership. I am proud to report that we received over 1600 recipes. We received underwriting from Dee Jewell, our Immediate Past State President and her Convention Committee, so that we were able to print a beautiful, hardbound book with recipes that vary from appetizers to desserts. We are all very proud of our book. The books sell for fifteen dollars ($15). Ten dollars ($10) from each book goes for medical scholarships, and is tax deductible.

For continued future growth, the board has voted to set up an endowment fund within SCIMER that gives us the ability to accept donations that will help our fund grow. The Board has approved that the State Alliance uses 50 percent of our proceeds from the cookbook as seed money for this endowment. The remainder will go to increase the amount we donate to scholarships this year.

Finally, I am asking for your help. We have been working hard to sell all our books because all the profit is not realized until all the books are sold. We still have books available. We would like to give each of you the opportunity to have a copy of this beautiful book, and provide you with a chance to make a donation to our scholarship fund. You may do this by sending orders to:

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CORRESPONDENCE: All manuscripts and correspondence should be addressed to The Editor, *The Journal of the South Carolina Medical Association*, P.O. Box 11188, Columbia, SC 29211.

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We request authors to advise the editor of any prior or anticipated duplication of their work in other publications. Submission of material as a "companion article" to material submitted elsewhere is discouraged.

PRIORITY FOR PUBLICATION: *The Journal* was founded in 1905 especially as a place for practicing physicians to publish their original observations. This purpose continues to receive priority. Growth of institutions, especially of medical school faculties, during this century may be, at least in part, responsible for a decreased tendency for practicing physicians to attempt scholarly work. Concerned about this trend, *The Journal* encourages practicing physicians to report original observations, including series of cases or individual case reports.

The Journal also welcomes timely review articles by institution-based physicians. However, it is the philosophy of the Editorial Board that state medical journals do not represent an appropriate forum for research findings of a specialized nature. Such findings, it is felt, belong in national or regional specialty or subspecialty journals. Articles by institution-based physicians should serve the information needs of a general physician readership. Articles dealing with social, economic, and ethical issues are strongly encouraged. Historical or philosophical essays are also welcomed, although these are given lower priority compared to the above categories.

On account of both space limitations and also our desire to encourage scholarship by as many South Carolina physicians as possible, it is our policy to decline publication of more than two (2) manuscripts by one author or group of authors within any calendar year or 12-month period.

REVIEWING AND RESPONSIBILITY TO READERSHIP: We will make every effort to review manuscripts promptly. All manuscripts will be reviewed by our editorial office and when indicated, the opinions of outside consultants will be solicited.

We welcome criticisms of journal content by members of the South Carolina Medical Association.

FINANCIAL DISCLOSURE: Upon acceptance of manuscripts for publication, we require disclosure of financial interest in pharmaceutical firms or other business enterprises when such disclosure seems to be appropriate to the editor or to members of the Editorial Board.

TYPES OF ARTICLES ESPECIALLY WELCOMED FOR CONSIDERATION

1. Original scientific observations (including case reports) made by practicing physicians.
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3. Articles pertaining to current social, economic, and/or ethical issues affecting the practice of medicine.
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We regret that space considerations limit our ability to publish longer articles, and request that authors adhere to the above guidelines. Similarly, tables and illustrations (see below), should be kept to a minimum, and be specific and pertinent.

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REFERENCES: These should be cited consecutively in the text, in superscript, e.g., "Bottsford, et al.[3]..." We recommend no more than ten references, selected from more recent publications in accessible journals in most instances. Standard journal abbreviations should be used, with the style for journal articles being as follows:

3. Bottsford JE, Bearden RC, Bottsford JG; A ten year community hospital experience with abdominal aorta aneurysms. J SC Med Assoc, 1983;79:57-62.

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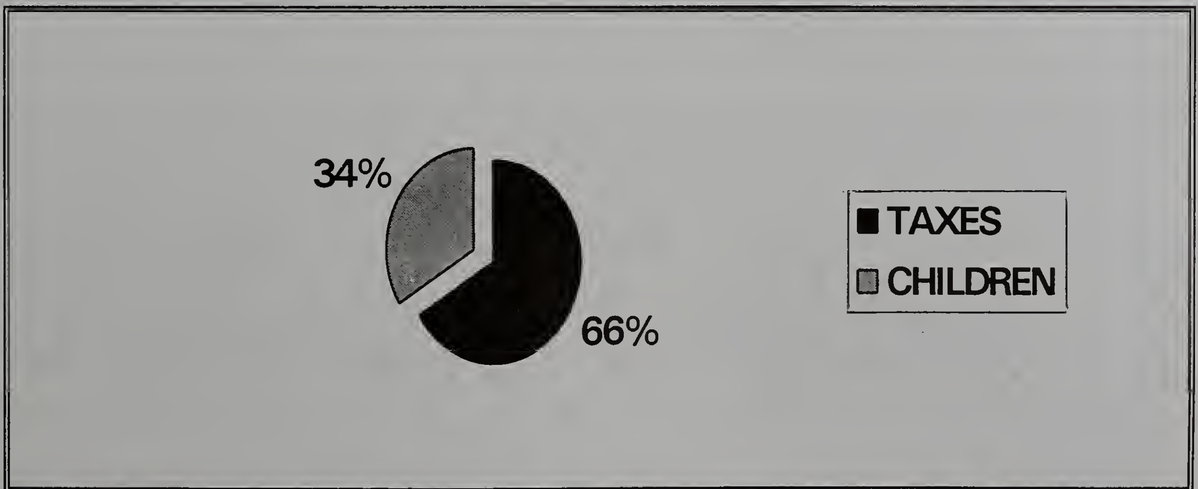

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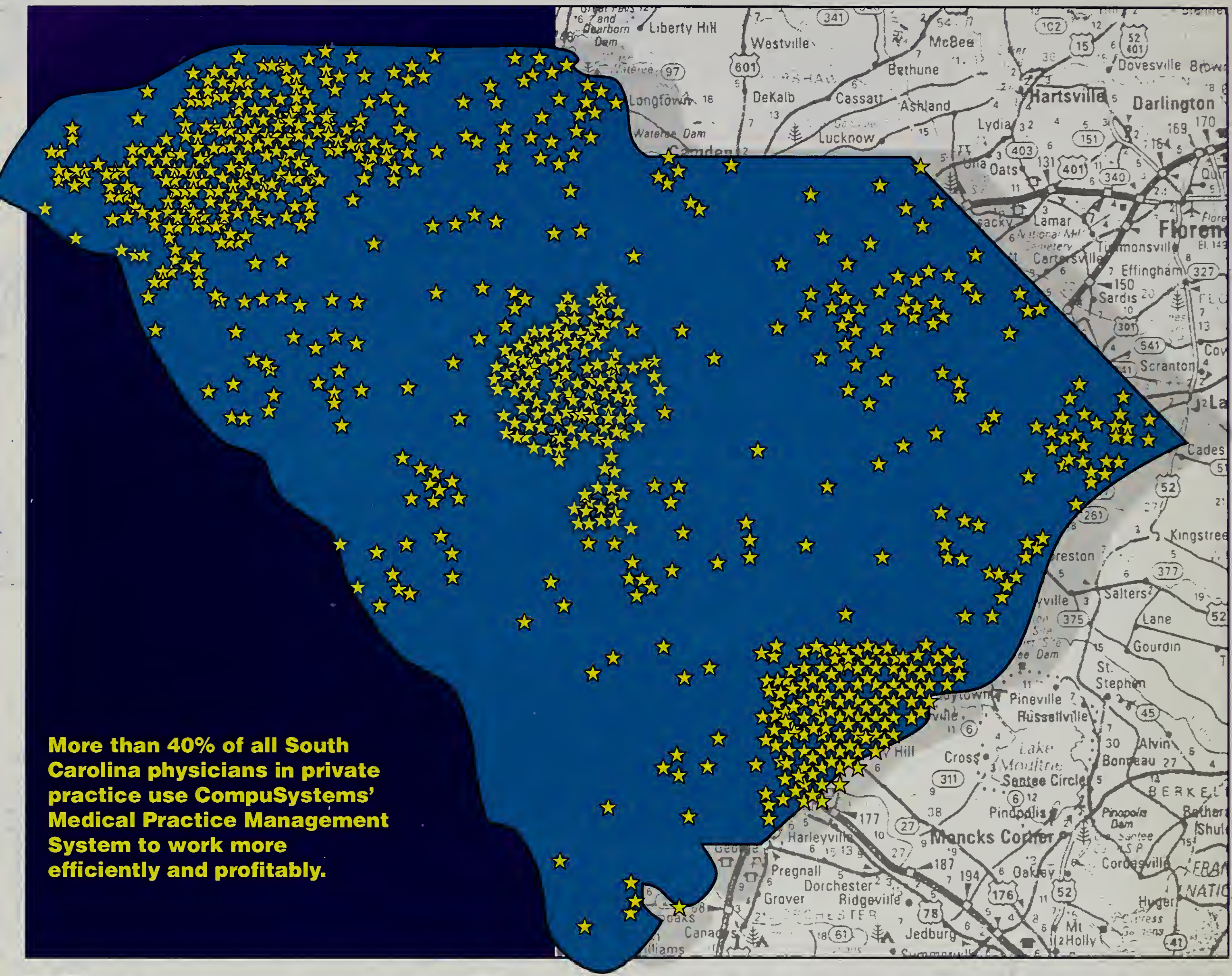

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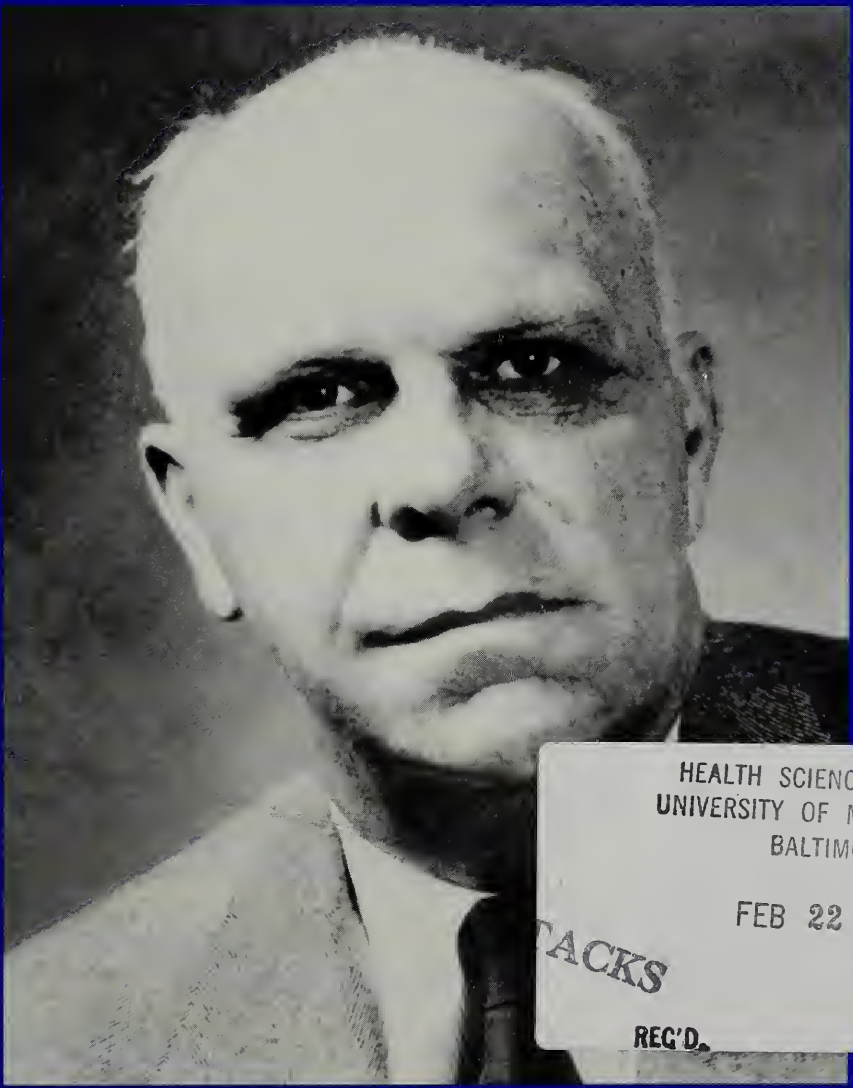

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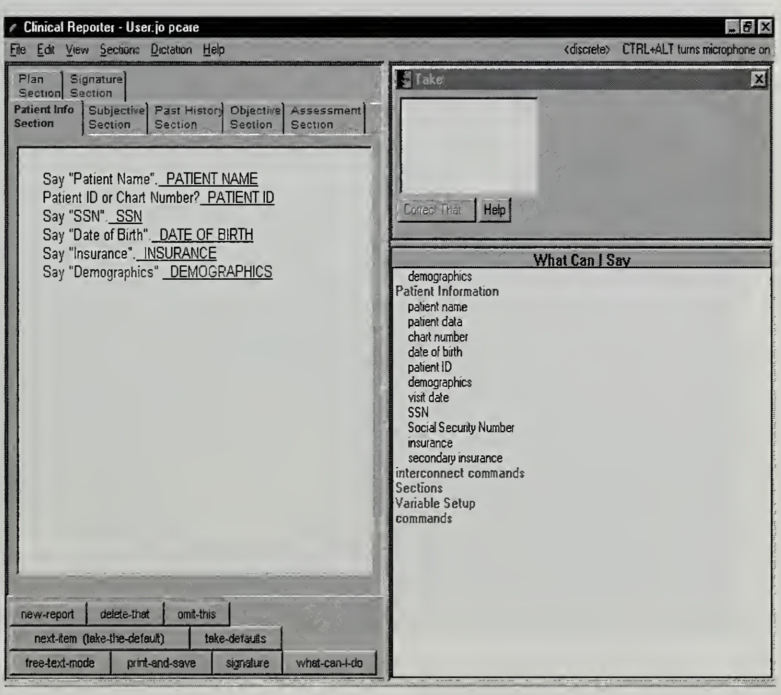

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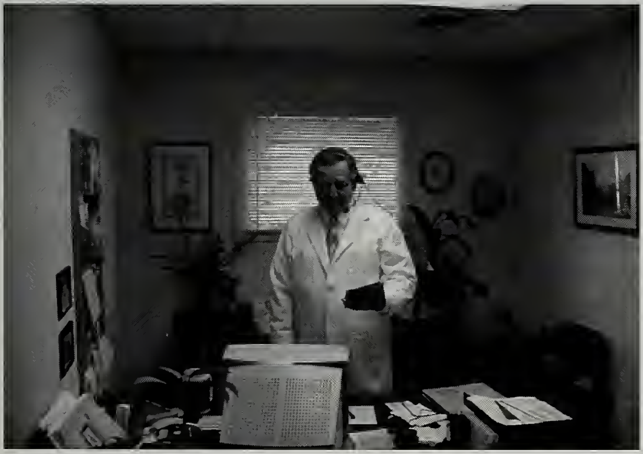

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President's Page

WHAT DO THE MEMBERS SAY?

We surveyed the attendants at the 1998 SCMA Annual Meeting and Scientific Session. The results are important to note.

Eighty four percent of the membership surveyed were men. However, this percentage will change drastically as up to 50 percent of our medical students are now women. Sixty-six percent were under 50 years of age. Only twenty-one percent of those surveyed were self-employed and twenty-five percent were hospital employees. At the time of the survey, sixty-seven percent of those polled were in our PCN (Physicians Care Network), but only 30 percent were members of the MIT (Members Insurance Trust). Already 33 percent were using computerized medical records.

Almost all of those surveyed participated in some managed care plans. For most, Medicaid was less than 20 percent of the practice and Medicare was less than 30 percent of the practice. Private insurance made up about 40 percent of most practices.

The doctors ranked the SCMA and the specialty societies at about equal importance. The top five issues of importance, ranked in order of importance, were coding, legislative issues, billing and collections, reimbursement, and information technologies. Hospital physicians were more interested in information technologies than the rest and large group physicians were less interested in legislative issues than the rest.

The SCMA is listening. Our long range plan is sensitive to these shifts in physician demographics and concern. We are very pleased in the active role young physicians have taken within the SCMA. The future of the SCMA looks bright.

Stephen -

Stephen A. Imbeau, M. D.
President

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SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

Dana Kickey, Editor
(803) 798-6207, in Columbia • (800) 327-1021, statewide
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February 1999

AMA UPDATE

❖ The AMA recently released its first Quality Care Alert, a new collaborative initiative with medical specialty societies that identifies important clinical research and communicates it directly to physicians. More than 170,000 physicians across the nation received the first alert, highlighting new research on the use of beta-blockers.

❖ As part of its ongoing commitment to providing service for the medical profession and strengthening the patient-physician relationship, the AMA is developing a series of booklets to help all physicians and their patients understand the Medicare + Choice program. The new booklets offer help to America's physicians as they begin implementing the Medicare + Choice program within their practices. The first booklet, "What is Medicare + Choice and Where Do Physicians Fit In?" is available to AMA members by calling (800) 262-3211.

❖ As tax season approaches, note that while AMA dues are not deductible as a charitable contribution, they may be partially deductible as a business expense.

AMA's Advocacy Behind the Scenes
❖ Patients' Bill of Rights...One of the most comprehensive national public health campaigns in recent years, led by the AMA, helped pass patients' protection legislation in more than 40 states. President Clinton issued an executive order to apply the Patients' Bill of Rights to federal health programs.

❖ Protecting vulnerable patient groups...The AMA successfully worked to maintain Medicaid entitlement and ensure that states continue to provide coverage for our country's most needy populations.

❖ Putting limits on the scope of practice...Concerned specialty societies joined with the AMA and successfully intervened in preventing limited license psychologists and optometrists from expanding the scope of their practices.

❖ Blocking Medicare user fees...The AMA led a successful campaign to block user fees from the FY99 spending package.

❖ Scaling back Physician at Teaching Hospital Audits (PATH)...In response to AMA lobbying, the Department of Health and Human Services took the unprecedented step of scaling back and refocusing Medicare billing PATH audits.

MEDICARE UPDATE

Reciprocal Billing
A patient's regular physician may submit claims and receive payment for covered services, which the physician arranges to be provided by a substitute physician on an occasional reciprocal basis. The following criteria must be met:

- The regular physician is unavailable to provide the services.
- The patient has arranged or seeks to receive the services from their regular physician.
- The substitute physician does not provide the services to Medicare patients over a continuous period of longer than 60 days.
- The regular physician identifies the services as substitute physician services by entering in Item 24d of the HCFA-1500 the modifier Q5 (Service furnished by a substitute physician under a reciprocal billing arrangement.)

Locum Tenens
It is a long-standing and widespread practice for physicians to retain a substitute physician to take over their practice when the regular physician is absent for reasons such as illness, pregnancy, vacation, or continuing medical education. The regular physician bills and receives payment for the substitute physician's services as though the regular physician performed them personally. The following requirements must be met:

- The regular physician is unavailable to provide services.
- The patient has arranged or seeks to receive the

—continued on page 4

RISK MANAGEMENT PROGRAM FOR NEW PHYSICIANS

The next Risk Management Program for newly licensed physicians will be held at the South Carolina Medical Association (SCMA) headquarters on Friday, May 21, 1999. There will be two sessions offered, 9:00 a.m.-12:00 p.m. and 1:00 p.m.-4:00 p.m. To register, call Cindy Osborn in Columbia at 798-6207, ext. 257, or statewide at (800) 327-1021. This program is sponsored by the Joint Underwriters Association (JUA)/SCMA Physician Risk Management Committee for physicians entering their first or second year of practice. Attendance at the program will enable new physicians in their first year of practice to obtain a 50 percent reduction in their JUA/Patients' Compensation Fund (PCF) professional liability premium and a 25 percent reduction for the second year. There is no registration fee.

OBJECTIVES OF PROGRAM:

At the end of the session, the attendee should be able to:

- Name the more common causes of medical malpractice.
- List several prevention strategies to avoid medical malpractice.
- Recognize the role of communication with patients in risk management.
- Outline the key points in record management as a role of risk management.
- Enumerate the proper steps to take when an adverse occurrence happens.
- Recognize the role of the JUA/PCF and the State Board of Medical Examiners in risk management.

PROGRAM OUTLINE

I. Introduction- *March Seabrook, MD (West Columbia, SC)*
II. Overview of JUA and PCF-*Sam McEwen, Manager, JUA Claims (Columbia, SC)*
III. Controlling Medical Liability-*March Seabrook, MD*
IV. If You Need A Lawyer-*Ashby W. Davis, JD (Greenville, SC), Steven A. Snyder, JD (Greenville, SC)*
V. Overview of the State Board of Medical Examiners-*J. D. Whitehead, Jr., MD, State Board of Medical Examiners (Columbia, SC)*
VI. Hospital Risk Management-*Karl Pfaehler, SC Health Alliance (Columbia, SC)*
VII. Question and Answer Session

CME CREDIT

The SCMA designated this continuing medical education activity for up to 3 hours of Category 1 credit toward the Physician's Recognition Award for the American Medical Association. Each physician should claim only those hours of credit he or she actually spent in the educational activity.

The South Carolina Medical Association is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.

SCRHA

The 3rd Annual Conference of the SC Rural Health Association

Keeping Rural South Carolina Healthy: Defining Our Role and Vision for the New Millennium

March 4-6, 1999
Embassy Suites Hotel
Columbia, SC

For information about attending, please contact David Hayden at (803) 771-2810.

LEGISLATIVE UPDATE

You can visit the SCMA website at www.scmanet.org for weekly updates on the all the bills which the SCMA is monitoring. We keep you up-to-date on the bills, their status, and the position that the SCMA has taken on each. To visit the site, log on to the SCMA homepage. The *Legislative Update* can be found under the *Legislative Activity* menu.

MEDICAID UPDATE

Rotavirus Vaccine
Medicaid will cover reimbursement for this vaccine by procedure code 90680, effective January 1, 1999, at $43.42.

Medicaid Card
Please note that the Medicaid card now indicates estimated office visits remaining for chiropractic visits in addition to ambulatory visits in fields CHIR VISIT REM and AMB VISITS REM.

Early and Periodic Screening Diagnosis and Treatment (EPSDT) Program Changes
Providers can now bill EPSDT services and immunizations on the HCFA-1500 using CPT codes. Providers who are set up for electronic billing may bill using the electronic billing system when using these CPT codes. Providers using the HCFA-1500 will bill under the Medicaid provider numbers they currently use for billing the HCFA-1500. Use of the 1724 form for billing purposes may continue through June 30, 1999, however, it is no longer required. Additionally, providers can now assume the responsibility for handling their own EPSDT scheduling for patients in their practice.

The DSS county offices will continue to be available to schedule transportation services and assist in referrals to other professionals.

DHHS plans to convene a group of medical professionals to review the current EPSDT required services and periodicity schedule to make recommendations concerning the minimum content of screenings and acceptable date ranges for completion of EPSDT screenings. If you wish to participate or provide recommendations to this group please contact Alicia Jacobs at (803) 253-6134.

If you have a desire to begin providing EPSDT services, or need assistance in how to bill using the HCFA-1500, please contact your program manager at (803) 253-6134.

SCMA WORKSHOPS

A CONSUMER'S GUIDE TO INFORMATION TECHNOLOGY IN THE MEDICAL OFFICE
March 11, 1999

The rate of change and the number of new information technology products and services becoming available is enough to make even an expert dizzy. This workshop will give you unbiased information on the computer technology explosion hitting medical offices. A few of the topics that will be covered are networks, computer tips and pointers, operating systems, remote communications, and many more. Register by March 1, 1999.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

THE $100,000 OFFICE MANAGER
March 25, 1999

Now, more than ever, medical practice managers and physicians are required to look upon their organizations as businesses. As such, they must streamline operations and manage costs in order to become more efficient and effective in an increasingly competitive environment. In this workshop, participants will review essential techniques and tips to manage the medical practice, ensure revenue enhancement, reduce overhead, and curb unnecessary spending. Register by March 15, 1999.

9:00 a.m. - 4:00 p.m.; Registration 8:30 a.m.
Columbia, Clarion Town House Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, ext. 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

IS YOUR OFFICE READY FOR Y2K?

PMSI can help! Let us come into your office and review your computer system to help you determine whether your office can handle the year 2000 bug. This kind of systems analysis is key to a safe transition into the new millenium. If there is a problem, let us help you discover and correct it before the bug gets you. For more information, call Anne Harvin Gavin at (800) 327-1021, extension 260.

—Medicare Update, continued on page 4

services from their regular physician.

- The regular physician pays the locum tenens for services on a per diem or fee-for-time basis.
- The substitute physician does not provide the services to Medicare patients over a continuous period of longer than 60 days.
- The regular physician identifies the services as substitute physician services by entering in Item 24d of the HCFA-1500 the modifier Q6 (service furnished by a locum tenens physician.)

Medical Group Claims

The requirements under reciprocal billing and locum tenens do not apply to the substitution arrangements among physicians in the same medical group where claims are submitted in the name of the group practice. On claims submitted by the group, the group physician who actually performed the service must be identified in the manner described below:

- The group's provider number is entered in Item 33 of the HCFA-1500.
  The individual provider number of the physician who actually rendered the services is entered on Item 24k for the appropriate line item.
- A single claim from may contain services rendered by more than one physician associated with the same group practice. If more than one physician in the group provided services for the same patient, the individual provider number of each physician who rendered services is entered on the appropriate line item in Item 24k.

Although these billing guidelines are not new, they are oftentimes confusing. Please refer to page 16 of the November 1997 *Medicare Advisory* for additional information regarding reciprocal billing and locum tenens arrangements.

MARK YOUR CALENDAR

The SCMA's Annual Meeting and Scientific Assembly is scheduled for April 29-May 2, 1999, at Charleston Place Hotel, Charleston, South Carolina.

PHYSICIANS CARE NETWORK UPDATE

• PCN is pleased to announce that we are in the process of distributing over $940,000 in retention to our providers. This represents withhold and bonuses for risk-sharing clients whose benefit year ended 4th quarter 1998. The next distribution will occur in April 1999.

PCN continues to grow. Currently, there are 6,983 participating physicians, 728 participating ancillary providers and 87 participating hospitals. PCN has 103 contracted groups with 55,899 covered lives. Information will be provided as contracts are received.

- Petty Nissan termed 12/31/98. Palmetto Primary Care and SC Independent School Association terminated 1/1/99.
- Please note that Baker Materials has changed its name to Linde Lift Truck Corporation. Please make this change to your Client List.

WE NEED YOUR HELP!

PCN provides claims repricing services for multiple access product groups. Unfortunately, a large majority of these clients do not provide us with eligibility. If the provider of service (you) does not indicate on the claim form the employer name and the name of the Third Party Administrator (TPA) and/or the Insurance Carriers name, it is impossible for PCN to determine where to send the claim for payment. The only alternative is to return the claim to you, the provider of service and request additional information or a copy of the I.D. card. This creates a claims payment delay for you.

When you complete the claim form, please indicate the employer name and the name of the TPA/ and/or the Insurance Carrier.

Please remember to notify PCN when you have a tax ID number change, address and/or phone number change, merge or change the name of your practice or when you add or terminate a physician from your group. Early notification will ensure provider directory accuracy and prevent claims payment delays.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, PCN at (803) 798-6207, extension 257 or statewide at 1-800-327-1021. You can also send an e-mail message to cindy@scmanet.org.

The Journal
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EARLY DIAGNOSIS OF ECTOPIC PREGNANCY AND TREATMENT WITH METHOTREXATE

DONALD L. FYLSTRA, M. D.*

The incidence of ectopic pregnancy, the implantation of a fertilized ovum outside the uterine cavity, has increased six-fold in the last two decades in the United States, and accounts for two percent of all pregnancies in this country.[1] Similarly, ectopic pregnancy incidence has increased four-fold in the United Kingdom.[2] This rise in the number of ectopic pregnancies can be attributed to a increase in the incidence of fallopian tube pathology, which is the common denominator in the majority of causes of extrauterine implantation. Over 100,000 ectopic pregnancies in 1992 resulted in almost 60,000 hospitalizations with an estimated cost of over $1 billion.[1,3] Ectopic pregnancy remains the leading cause of maternal death in the first trimester[4] and causes 9-13 percent of all pregnancy related deaths.[5] It is estimated that 40 women die each year in the U.S. from ectopic pregnancy,[6,7] and many of these women had previously seen a physician for symptoms and the diagnosis was missed.

EARLY DIAGNOSIS

Prior to rupture and the need for urgent surgical exploration, the early diagnosis of ectopic pregnancy allows treatment options. Early diagnosis should decrease morbidity and eliminate mortality and potentially preserve reproductive capability, increasing the number of subsequent intrauterine pregnancies and decreasing the number of repeat ectopic pregnancies. Early recognition can also limit the cost of diagnosis and treatment.

The early diagnosis of ectopic pregnancy can only be made with a high index of suspicion. Every reproductive age female patient presenting with abdominal pain or vaginal bleeding should be screened for pregnancy. While less than fifty percent of women with an ectopic pregnancy give a history of a pre-existing condition considered to be a risk factor,[8] extrauterine implantation should be suspected in a patient with a history of tubal infection, tubal reconstructive surgery, prior infertility, current or past IUD use, and sterilization failure. When suspected, the diagnosis of ectopic pregnancy can be confirmed by using a combination of biochemical and ultrasound parameters.

The identification of an intrauterine pregnancy with ultrasound nearly always eliminates the possibility of ectopic pregnancy. The only exception to this is heterotopic pregnancy, which is the coexistance of both intrauterine and extrauterine gestations and occurs approximately once per 4000 spontaneous pregnancies,[9] but probably more frequently in pregnancies resulting from assisted reproduction.[10] The confirmation of an intrauterine pregnancy with transvaginal ultrasound relies upon recognition initially of a *gestational sac* and, soon thereafter, upon structures within the sac consis-

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TABLE 1—Methotrexate treatment of ectopic pregnancy*

Indications
Desire for future fertility
Stable or rising hCG with peak < 15000 mIU/ml
Hemodynamically stable, no active bleeding
Adnexal mass < 3.5 cm
Selective cases of cervical and cornual pregnancies

*From the American College of Obstetricians and Gynecologists Technical Bulletin No. 150[27], and Stovall and Ling[21]

tent with a developing embryo. A thick echogenic rim surrounding a sonolucent center (*the gestational sac*) can be recognized within the uterus by transvaginal ultrasound soon after the missed menses. This is a decidual reaction surrounding the early chorionic sac. A *pseudosac* is a collection of fluid within the endometrial cavity created by bleeding from the decidualized endometrium associated with an extrauterine implantation and should not be mistaken for a normal early intrauterine pregnancy. The true early gestational sac is eccentrically placed within the uterus beneath the endometrial surface, whereas the pseudosac conforms to and fills the endometrial cavity itself.

The yolk sac is the first visible structure within the gestational sac and is pathognomonic of a pregnancy. It is a distinct bright echogenic rim with a sonolucent center and is recognized three weeks after conception. The embryo begins as a thickening along an edge of the yolk sac, and embryonic cardiac motion can be first observed three and one half to four weeks after conception. In a well dated pregnancy, with reliable ovulatory timing, a intrauterine pregnancy should be recognized with transvaginal ultrasound by 24 days after ovulation or 38 days after the last normal menstrual period.[11] The dependability of this ultrasound technology relies greatly on experience with transvaginal sonography.

In the absence of absolutely reliable menstrual and ovulatory dating, ultrasound findings should be correlated with serum levels of human chorionic gonadotrophin (hCG). The *discriminatory zone* of hCG is that level of hCG at which all intrauterine pregnancies should be visualized with ultrasound. With abdominal ultrasound, that level is 6500 mIU/ml (WHO Third International Standard as measured by radioimmunoassay). However, high resolution transvaginal ultrasound has reduced the discriminatory zone down to 1500-1800 mIU/ml. If transvaginal ultrasound fails to visualize an intrauterine pregnancy when the hCG level has reached the discriminatory zone, the pregnancy can generally be considered extrauterine. An exception to this is multiple gestations. HCG levels in multiple gestations may reach well over 2000 mIU/ml before transvaginal ultrasound recognition.[11] Therefore, if a multiple gestation is a possibility, such as pregnancies resulting from assisted reproduction, the hCG discriminatory zone should be raised.

The possibility of ectopic pregnancy is frequently considered before hCG has reached the discriminatory zone and before ultrasound recognition.[12] HCG rises exponentially in early normal pregnancy and should double every 1.4 to 2.1 days, with a minimum 66 percent rise in two days.[13,14] This doubling is less reliable after 10,000 mIU/ml, and serial measurements of hCG beyond this level are not helpful. Although 15 percent of normal intrauterine pregnancies can demonstrate

TABLE 2—Methotrexate treatment of ectopic pregnancy*

Contraindications
Hepatic dysfunction, SGOT 2 X nl
Renal disease, Cr > 1.5 mg/dl
Blood dyscrasia, WBC < 3000, PLT < 100,000
Active peptic ulcer disease
Presence of embryonic cardiac motion
Expected poor patient compliance with follow up

*From the American College of Obstetricians and Gynecologists Technical Bulletin No. 150[27], and Stovall and Ling[21] an abnormal early rise of hCG,[13] the majority of gestations with an abnormal hCG rise, an hCG level plateau, or fall, are abnormal pregnancies.

A single serum progesterone level can be predictive of an abnormal pregnancy.[14-18] Serum progesterone levels are not gestational age dependent, remain relatively constant during the first trimester of normal and abnormal pregnancies, and do not correlate with hCG levels. Unlike hCG, serial measurements of serum progesterone levels are not necessary. A single progesterone level less then 10 ng/ml (as measured by radioimmunoassay) is generally not compatible with normal pregnancy. However, a progesterone level greater than 20 ng/ml is nearly always consistent with a normal pregnancy. Values of progesterone between these two levels are equivocal.

TABLE 3 **Single-dose methotrexate protocol***

Day	Therapy
0	hCG, CBC, SGOT, BUN, Cr, Blood Type and Rh Administer methotrexate, 50 mg/m^2
4	hCG
7	hCG

if < 15% decline in hCG between day 4 and 7, repeat CBC, SGOT, BUN, Cr, and if no contraindication, repeat same dose of methotrexate

if > 15% decline in hCG between day 4 and 7, follow hCG weekly until < 10 mIU/ml

if hCG level plateaus, repeat same dose of methotrexate

*From Stovall and Ling[21]

$$\text{Surface area (m}^2\text{)} = \sqrt{\frac{\text{weight (pounds)} \times \text{height (inches)}}{3130}}$$

Women with ectopic pregnancy and failed intrauterine pregnancy frequently have very similar signs and symptoms and are biochemically indistinguishable. Abnormal hCG and progesterone levels can be used to distinguish between normal and abnormal pregnancy, but cannot reliably locate the pregnancy. Endometrial curettage is usually unnecessary to confirm ectopic pregnancy when nothing is seen within the uterus with transvaginal ultrasound in patients with a rising hCG level above the discriminatory zone. However, an endometrial sampling may be needed to evaluate the possibility of a failed intrauterine pregnancy.

An endometrial biopsy or formal dilatation and curettage can be done with an abnormal hCG rise or with a single abnormal serum progesterone level (less than 5 ng/ml) without fear of interrupting a viable intrauterine pregnancy.[18] Then, in the absence of chorionic villi on immediate gross examination by *float testing* (the gross recognition of frond like structures consistent with chorionic villi when tissue is floated in saline) or microscopic pathologic examination of the curettage specimen, ectopic pregnancy is confirmed. An exception to this occurs when the clinical history is consistent with a completed spontaneous abortion of a failed intrauterine pregnancy. Patients with completed spontaneous abortion should give a history of recent heavy vaginal bleeding and will have falling hCG titers and no chorionic villi on endometrial sampling. These patients can be followed expectantly.

With low hCG titers and before the appearance of a gestational sac, transvaginal ultrasound measurement of endometrial stripe thickness can be predictive of gestational pathology. Patients with normal pregnancies have a greater endometrial stripe thickness than do those patients with failed intrauterine and ectopic gestations. In one report,[19] 97 percent of patients with a stripe thickness less than 8 mm had abnormal pregnancies, and 71 percent of these abnormal pregnancies were ectopic in location. Only 41 percent of patients with a stripe thickness greater than 8 mm were abnormal, and only 14.7 percent were ectopic in location. No patient with an endometrial stripe thickness greater than 13 mm had an ectopic pregnancy, and no patients with a stripe thickness less than 6 mm had a normal pregnancy.

METHOTREXATE THERAPY

Methotrexate is a antimetabolite that binds to the catalytic site of dihydrofolate reductase, interrupting the synthesis of purine nucleotides and the amino acids serine and methionine, thus interfering with DNA synthesis and cell multiplication. Methotrexate affects actively proliferating tissues such as bone marrow, buccal and intestinal mucosa, malignant cells, and trophoblastic tissue. Methotrexate has been used to treat gestational trophoblastic disease for decades, and now there are numerous reports describing its success in resolving ectopic pregnancy.[17,20-26] The published inclusion and exclusion criteria for ectopic pregnancy treatment with methotrexate are shown in Tables 1 and 2.[21,27] Success rates with methotrexate range from 71.4 percent to 94.2 percent, using a single dose of 50 mg/m2 administered intramuscularly. Systemic methotrexate is equally as effective in resolving selective tubal pregnancies as laparoscopic salpingostomy, with a similar incidence (5-30 percent) of persistent ectopic pregnancy (residual trophoblastic tissue which continues to proliferate, cause symptoms, and even result in tubal rupture). Methotrexate can also be effectively used to treat selected interstitial and cervical implantations which traditionally require more invasive surgery than linear salpingostomy for tubal implantation. Although the overall future reproductive success of patients with ectopic pregnancy is poor and depends primarily upon with condition and patency of the contralateral fallopian tube, the subsequent intrauterine pregnancy rates after methotrexate therapy are comparable to that following laparoscopic salpingostomy.

A protocol for systemic methotrexate use is shown in Table 3. Included is a formula used to calculate body surface area in m^2. The methotrexate protocol accepts at least a 15 percent fall in hCG level between days four and seven after initial therapy, and a progressive decline thereafter, usually measured weekly. Otherwise, a second dose of methotrexate is necessary, or secondary treatment with surgical rescue.[21] Some patients will experience abdominal pain within a few days of methotrexate therapy. This abdominal pain, if accompanied by stable hemodynamic parameters and hemoglobin level, is not a sign of tubal rupture, but due to tubal abortion from the resolving trophoblastic mass, and can be managed expectantly. HCG levels should be followed until a nonpregnant level is reached, and this may take several weeks. Rupture of an ectopic gestation can occur with an hCG level as low as 10 mIU/ml.

Methotrexate failure is more likely to occur in patients with higher pretreatment pregnancy hormone levels (hCG greater than 15,000 mIU/ml and serum progesterone greater that 10 ng/ml), a large adnexal pregnancy mass (greater that 3.5 cm), or adnexal embryonic cardiac motion. These situations present possible contraindications to methotrexate use and primary surgical therapy should be considered. The 50 mg/m2 single dose protocol eliminates the need for folinic acid rescue. Methotrexate morbidity with doses used to treat ectopic pregnancy is uncommon, and maternal death from this use of methotrexate has not been reported. However, pretreatment exclusion of gastrointestinal, hematopoietic, hepatic, and renal disease is recommended. Patients with active peptic ulcer disease, anemia, leucopenia, thrombocytopenia, elevated liver enzymes, and elevated blood urea nitrogen and creatinine should not be treated with methotrexate. These biochemical markers should also be followed when a second or third dose of methotrexate is administered. Patients treated with methotrexate should be encouraged to report any fever, stomatitis, nausea, or vomiting.

The success and subsequent pregnancy rates after conservative tubal surgery (salpingostomy) for tubal pregnancy depend greatly upon surgeon skill and equipment. A surgical procedure that removes an ectopic pregnancy but leaves behind a charred and scarred fallopian tube does not preserve reproductive potential. Methotrexate removes surgeon skill as a variable to affect future fertility. In many carefully selected patients, methotrexate can be a successful alternative to surgical treatment. Considerable cost savings should also be expected with methotrexate therapy. Estimates between $97 million and $265 million could be saved each year in the United States if methotrexate were used in qualifying patients.[28-32] This treatment may become more and more encouraged as health care dollars become more tightly controlled. Methotrexate should be considered for primary treatment for selected unruptured early ectopic pregnancies. However, in order to maximum success and minimize patient morbidity, the guidelines presented should be strictly followed. ❑

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BEHAVIORAL RISK FACTORS FOR HEART DISEASE AND THE ATTEMPT TO CHANGE RISK BEHAVIORS AMONG ADULT SOUTH CAROLINIANS

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Heart disease remains a significant health problem in South Carolina. According to South Carolina's mortality data and hospital discharge data, heart disease claimed more than 10,000 lives and cost $696 million in treatments for inpatients in 1995. Cigarette smoking, elevated blood cholesterol, high blood pressure, physical inactivity, being overweight, and diabetes have been established as modifiable risk factors of heart disease.[1,2] The Centers for Disease Control and Prevention estimated that 25 - 43 percent of deaths from heart disease were attributed to each of these behavioral risk factors.[3] Changing behavioral risk factors is an important means to prevent heart disease[4] and has contributed to the decline of heart disease mortality in the past three decades.[5] The purpose of this study was to examine the prevalence of behavioral risk factors for heart disease among adult South Carolinians and to determine the frequency of attempts to change these factors among people at risk.

METHODS

The data for this analysis were taken from the 1996 South Carolina Behavioral Risk Factor Surveillance System (BRFSS), a population-based random-digit-dialed telephone survey conducted every year by the South Carolina Department of Health and Environmental Control, in conjunction with the Centers for Disease Control and Prevention (CDC). The BRFSS is used to determine self-reported risk factors and health status among adults age 18 years and older.[6]

The BRFSS collects data from survey respondents about risk factors and behaviors such as cigarette smoking, physical activity, body weight, awareness of hypertension, hypercholesterolemia, and diabetes. To assess the adoption of healthy lifestyles, BRFSS collects information about survey respondents' attempts to quit smoking, to change dietary habits, and to increase physical activity. The detail survey questions are published at the CDC's web site (http://www.cdc.gov/nccdphp/brfss).

In this study, current smokers were persons who reported having smoked at least 100 cigarettes during their lifetime and who said they were smoking every day or some days at the time of the survey.[7] Persons were considered physically inactive if they reported not participating in any kind of physical activity, or if they were irregular in their physical activity participation habits.[8] Body mass index (BMI) was calculated by dividing the respondent's weight in kilograms by the square of their height in meters. Persons were considered at risk of overweight if their BMI was greater than 27.8 for men or 27.3 for women (CDC 1989).[9]

Data for blacks and other races were combined as non-white because people of other races were too few (<1.6 percent) in the BRFSS survey respondents. Rates reported in this study represent estimated population prevalence rates for the proportion of the South Carolina population with the specific risk factor or behaviors at the time of the BRFSS interview. The prevalence was calculated using the SUDAAN software.[10] No statistical testing is reported for the results because rather than hypothesis tests, the data are published to describe the differences in heart disease risk behaviors between groups.

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Table 1. Estimated prevalence (%) of risk factors for heart disease among adults in South Carolina, 1996

	Over-weight	Cigarette Smoking	Hypercholesterolemia	Hyper-tension	Physical Inactivity	Diabetes	Any one of risk factors
All	32.1	24.4	19.8	24.9	62.5	5.4	85.2
By race							
White	27.2	26.7	21.6	23.1	60.4	4.5	83.3
Non-white	44.4	18.8	15.4	29.2	67.5	7.5	89.9
By sex							
Men	33.8	25.0	16.9	21.8	60.2	5.1	83.2
Women	30.3	23.5	22.2	27.3	63.9	5.6	86.1
*By race-sex**							
W-M	30.6	26.2	19.4	20.9	59.0	4.2	81.7
W-W	24.0	27.2	23.6	25.2	61.7	4.8	84.8
NW-M	43.6	22.8	10.7	25.1	65.5	7.5	90.3
NW-W	45.1	15.5	19.2	32.6	69.5	7.5	89.6

* W-M: White men; W-W: White women; NW-M: Non-white men; NW-W: Non-white women.

RESULTS

In 1996, 1,879 South Carolinians responded to the South Carolina BRFSS. There were 749 men and 1,130 women, and 1,412 white and 447 non-white respondents (20 individuals did not report their race). The average age of the survey respondents was 45.1 years. These respondents represent a random sample from the approximately 2,750,000 adults aged 18 and older in South Carolina at the time of the BRFSS 1996 survey.

As shown in Table 1, 85 percent of South Carolina adults had one or more risk factors for heart disease. The prevalence of current cigarette smoking was 24 percent. Nearly one-third (32 percent) of adults were classified as being overweight. Sixty-two percent of South Carolinians were classified as being physically inactive. Twenty-five percent of South Carolina adults reported having hypertension, 20 percent of adults had elevated blood cholesterol, and five percent reported having been diagnosed with diabetes.

There were considerable differences in the prevalence of risk factors among race-sex-groups. Women were more likely to report having hypercholesterolemia and hypertension than men. Non-whites were more likely to report being physically inactive, overweight, and hypertensive than whites. More whites were current cigarette smokers than

Table 2. Prevalence (%) of attempt to change risk factors for heart disease among people who were at risk

Attempts	Quit smoking	Be physically active		Eat less fat / cholesterol
People at risk	Cigarette Smokers	Sedentary	Overweight	Overweight, hypertension hypercholesterolemia
All	46.6	53.3	69.1	74.7
White men	41.5	51.6	68.6	77.6
White women	51.6	52.8	64.8	78.3
Non-white men	42.2	61.4	82.0	69.1
Non-white women	51.2	51.3	64.8	67.4

non-whites. Non-white women had the highest prevalence of physical inactivity, being overweight, and reporting hypertension, but they had the lowest prevalence of cigarette smoking among the four race-sex- groups. Non-white men reported the lowest prevalence and white women reported the highest prevalence for hypercholesterolemia. White women were least likely to be classified as overweight based on the BMI. White men reported the most physical activity, and the least hypertension.

Many people at risk for heart disease reported attempting to modify their risk by changing their behavior. (Table 2) The extent of attempting to change risk factors varied considerably by the risk factors and between the populations groups. Nearly half of the current cigarette smokers reported quitting cigarette smoking for one day or longer during the past 12 months. Three quarters of people who were classified as being overweight and reported hypertension or hypercholesterolemia attempted to eat less fat and cholesterol. Sixty percent of people who were physically inactive and/ or overweight reported they had tried to be more physically active or to exercise more often. Among respondents who said they were current cigarette smokers, more women tried to quit smoking than men. More whites tried to change dietary behaviors to eat less fat or less cholesterol than non-whites. On the other hand, more non-white men reported attempting to be more physically active as compared with overweight or physically inactive people in other race-sex groups.

DISCUSSION

The 1996 BRFSS survey shows that the prevalence of cigarette smoking, being physically inactive, overweight, or having hypertension, hypercholesterolemia, or diabetes remains very high among adult South Carolinians. Six out of seven adults had one or more of these modifiable risk factors for heart disease. The prevalence of risk factors for heart disease, especially being overweight and physically inactive, was higher among non-whites than whites.

Among CHD risk factors, physical inactivity was nearly twice that of any other single risk factor. Because of its high prevalence, physical inactivity presents as an important single risk factor for action to reduce heart disease risk among adult South Carolinians. Regular physical activity reduces the risk of dying prematurely from heart disease, reduces the risk of developing diabetes and hypertension, and helps control body weight.[8] Regular physical activity is universally accepted as an important component in the primary prevention of heart disease[11] and could prevent 36 percent, approximately 4,000 deaths, from heart disease in South Carolina.

These BRFSS data indicate that many people recognized their CHD risk factors and attempted to quit smoking, eat less fat or cholesterol, and be more physically active. The efforts to change risk behaviors varied by the type of behavior and among race-gender-groups. These efforts range from 42 percent of white men who tried to stop smoking to 78 percent of white women who tried to change their dietary behaviors for fat and cholesterol consumption. These data also suggest that the priority and choice of actions taken to change risk factors vary among population sub-groups. The promotion of healthy lifestyles should take into account these race-sex specific considerations. Regardless of the large percentage of people at risk who reported attempting to change their risk factors, the prevalence of many risk factors has not decreased significantly since 1985, the first year in which BRFSS data were available. Greater efforts must be made not only to change these risk factors, but also to reinforce the changes and to maintain healthy behaviors.[12]

Physicians are encouraged to note that on the 1996 South Carolina BRFSS survey, women indicated they are more likely to attempt cigarette smoking cessation than men. Non-whites reported being more likely to increase their physical activity as a response to perceived cardiovascular risk factors, whereas whites reported being more likely to try to modify their diets. These tendencies may assist clinicians with counseling individual patients to reduce CHD risk factors. Clearly it is prudent for physicians to encourage their adult patients to undertake 30 minutes of daily moderate physical activity that is sufficient to reduce the risks for coronary heart disease.[13] ❑

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CHALLENGES TO UNIVERSAL NEWBORN HEARING SCREENING IN A SOUTH CAROLINA REGIONAL MEDICAL CENTER

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The interest in newborn hearing screening has grown as the technology has become available and as understanding has developed of the importance of early identification and habilitation to language development, communication within a family, and future educational achievement.[1,2,3,4,5,6] A recent study by Yoshinago-Itano[7] established that children with hearing loss who were identified before six months and who received early intervention, developed age appropriate language in comparison to their normal hearing peers. This was not true of children who were identified after the age of six months. This effect was found for mild, moderate, severe and profound hearing losses and was independent of gender or socioeconomic status.

Universal newborn hearing screening (UNHS) is in its early stages in South Carolina. Currently eight hospitals are participating in a one year pilot program to gather data prior to statewide implementation. Tuomey Healthcare System (THS) was one of the first hospitals in South Carolina to screen the hearing of all newborns prior to discharge. THS births approximately 100 babies per month. The hospital is located in a town with a population of approximately 50,000 and also serves surrounding rural areas. Four years of experience has revealed some of the practical obstacles to screening and to providing support services for hearing impaired infants and their families. The purpose of this study was to identify areas in the UNHS program which were barriers to the consistent provision of services to infants with hearing impairment and their families.

METHODS

After extensive review and evaluation, the committee at THS selected the Automated Auditory Brainstem Response (AABR™) technology unique to the ALGO™ Newborn Hearing Screener (Natus Medical Inc. San Carlos, CA). The program initially used the ALGO™ 1+ model which was replaced by the ALGO™ 2 in December 1995. The AABR™ 2 was subsequently chosen for use in the South Carolina pilot program. The device measures activity along the hearing pathway from the ear to the brainstem. Sensors are placed on the baby's head and record the brainwave responses to sounds sent through disposable earphones. The advantages of AABR™ screening technology is its high specificity and sensitivity, ease of operation, immediate pass/refer outcome, and cost effectiveness.

Testing is provided by the newborn nursery staff within the first 24 hours after birth. Babies who do not pass the initial screen on one or both ears are rescreened immediately. The nursing staff educates the families about the hearing screen and communicates the results prior to hospital discharge. For those who do not pass, the staff audiologist and coordinators from Babynet (a statewide early intervention program) schedule additional testing within two-three weeks post discharge.

RESULTS

A total of 5156 babies have been screened to date. Of the 5156, 2063 were screened with the ALGO™1+. Outcome data will be discussed for the 3093 newborns who received screening on the ALGO™2. Five (0.16 percent) infants left the hospital prior to receiving a screen. Of the 134 (4.3 percent) who were referred for further testing, 78 (58 percent) passed, 22 (16 percent) did not keep the appointment, 11 (8 percent) are in process, and 23 (17 percent) were identified with hearing loss. The 23 infants (0.7 percent of infants screened) identified with hearing loss had mixed hearing loss (3), conductive hearing loss (14), or sensorineural hearing loss (3). Three infants received further services and evaluations elsewhere.

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Habilitation/treatment

All types of hearing loss- the results are reported to the pediatrician/primary care physician to obtain a referral to an otolaryngologist. After treatment and/or diagnostic evaluation the infant returns to the audiologist for an audiological evaluation, and recommendations for habilitation and/or monitoring of the hearing..

Mixed and sensorineural hearing loss - in addition to the above, referrals are made to the local health department, in particular Babynet, Childrens Rehabilitative Services (CRS), and Ski-Hi to coordinate services for the newborn and their family. Ski-Hi is the outreach program of the South Carolina School for the Deaf and Blind and parent advisors are available to visit the families weekly.

CHALLENGES

Referral rate

The current referral rate is four percent; the goal is to bring the referral rate below three percent. Of the four percent, about .75 percent (23/3093) can be considered as true positives, giving a false positive rate of over 3 percent. The nursing staff has found that a convenient time to screen the newborn is immediately after birth. Generally the infant is quiescent. However, this may increase the number of infants needing to be rescreened. Referral rates do drop over the first 24 hours postpartum due to maturational effects and resolution of barriers to sound such as middle ear fluid and debris in the external earcanals. Staff turnover may also cause a transient increase in the referral rate until new employees gain experience in the skills necessary for hearing screening.

Babies discharged prior to screening

At THS hearing screening is incorporated into the standing orders for the care of newborns. Less than 0.2 percent are discharged before they receive a hearing screen. Possible reasons for an infant not to receive a screen are a} parents decline testing and b} early discharge or equipment malfunction. In the latter case, infants are scheduled for a hearing screen with the staff audiologist within two or three weeks of leaving the hospital.

No show rates

Of those infants who are referred for further testing in either one or both ears after the AABR™ screen, approximately 16 percent are not seen for that testing. Appointments with the audiologist are made by letter to the parent(s). If the first appointment is not kept, a second one is made within a month. If the parents fail to keep this appointment, a letter is sent to them reiterating the importance of the testing and requesting that they call for an appointment. A copy of this letter is sent to the primary care physician and to the Health Department. In many cases the physician or the health department staff will intervene and ensure that an appointment is made and kept. However this still leaves a significant number of babies who do not receive additional audiological testing. A certain number have moved from the area or call to decline testing and this is documented. Those who did not pass the AABR™ screening *in either ear* are referred to Family Support Services (FSS) at the Health Department. Efforts are then made by a registered nurse to visit and assist the family to obtain the recommended services for their newborn. In 1997 the number of infants who were referred in both ears was only nine (0.7 percent of infants screened) and two were referred to FSS.

Monitoring infants at risk for delayed onset hearing loss

The 1994 recommendations of the Joint Committee on Infant Hearing[8] include biannual audiological evaluations for infants and children who are at risk for delayed onset hearing loss. At THS approximately seven infants born in 1997 met those criteria (0.6 percent of infants tested). Of 31 evaluations in 1997 of children between birth and three years receiving audiological monitoring, 24 yielded abnormal results. The majority were conductive hearing losses and medical referrals were made. However, one child had a progressive unilateral sensorineural hearing loss and another showed evidence of auditory neuropathy secondary to kernicterus. Monitoring infants who are at risk for developing hearing loss will probably be more effective when infants with asymptomatic congenital cytomegalovirus are identified at birth[9,10] and can receive routine audiologic evaluations.

Coordination with state agencies and support services

One of the most effective ways that we have found to coordinate services to these children and their families has been a weekly meeting. Representatives from the local health department including Babynet, family support services, and CRS, Ski-Hi, local school districts, audiology, speech pathology, and developmental pediatrics are generally present.

CONCLUSIONS

In conclusion, hospitals across the country have demonstrated success using various technologies in UNHS. Most of the issues in infant hearing screening have been successfully addressed by the available technology. However, there are still some challenges to ensuring that the infants who are referred for further testing receive that testing in a timely manner. Even more important is to ensure that the infants identified with hearing loss receive consistent and early habilitation. It was found that coordination between service providers and in some cases, the provision of additional family support, is helpful in improving the quality of the early intervention services. The solutions will vary from community to community, but will involve professionals and agencies working together with the families on a individual basis.

As a word of caution, it is possible to have a false sense of security when an infant passes a newborn hearing screen. Parental concern should be taken seriously as progressive or delayed onset hearing loss has not been an uncommon finding since screening was initiated at THS. ❑

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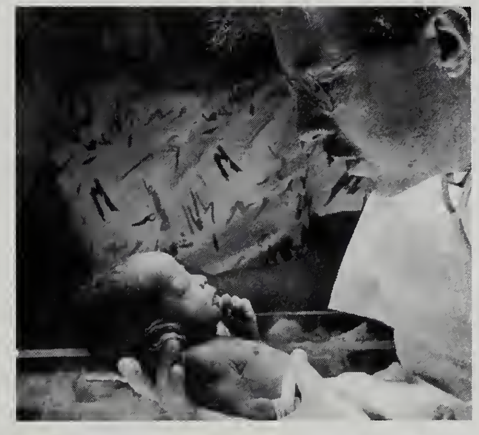

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PHYSICIAN SUPPLY IN UNDERSERVED AREAS OF SOUTH CAROLINA: GOING FROM BAD TO WORSE?

WILLIAM J. HUESTON, M. D.*; SABRA SLAUGHTER, PhD;
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Like many predominantly rural states, South Carolina has many areas where residents lack adequate access to health care due to relative shortages in the supply of health care providers. The South Carolina Department of Health Education and Environmental Control estimates that in 1998, the state requires 83 additional physicians to meet the needs of underserved areas and that over 1 million individuals or 36 percent of the population of the state face difficulty getting access to health care (South Carolina Department of Health and Envirnmental Control, personal communication, March, 1998) . These people live in 56 areas that carry the designation as a Health Professional Shortage Area (HPSA). Thirty-eight counties in South Carolina have at least one area that is designated as a HPSA; nearly 70 percent of these are rural counties. While there has been a trend downward in the number of HPSA's over the past ten years, estimates still show that nearly 84 physicians would be needed in these underserved areas to provide adequate health care access for all citizens of South Carolina.

The greatest need in these underserved areas is for primary care services. Since family physicians are most likely to locate in rural, underserved areas,[1] it is most likely that increases in the number of family physicians who practice in South Carolina is one strategy that might address the health professional shortages in these rural communities. Compared to institutions in other states, the two medical schools in South Carolina have an excellent record in the past ten years of producing medical school graduates who enter family practice.[2,3] Over 20 percent of South Carolina medical school graduates select family practice for their training. Despite this though, the number of HPSAs and family physicians needed to satisfy this shortage have only declined marginally over the last decade. As pointed out by the deans of the two state medical schools, the numbers of medical students and percent electing primary care are sufficient to meet health care work force goals.[4] However, the distribution of physicians still needs work.

Having medical school graduates enter family practice is just one factor in a complicated equation that determines health professional shortage. Evidence suggests that residents tend to locate within the service area of their training institution. If South Carolina residency programs are not successful in recruiting the state's medical school graduates, there is a reduced likelihood that they will return after they train out-of-state. Secondly, if residency graduates who perform their family practice training in a South Carolina residency program are unlikely to locate in rural areas, there will be little impact on reducing health shortages. Finally, retention of current rural providers is another issue. The retirement of older physicians who practice in rural areas plus the loss of younger physicians who initially may locate their practice in rural areas but then leave may make it difficult to alleviate health care shortages.

The aim of this project is to explore the relative impact of medical school graduate specialty and training location selection, historical trends for family practice graduates from South Carolina training programs entering practice in rural area, and projected attrition from practice in underserved areas on the future health care needs in these underserved areas.

METHODS

This study relied on two general sources of data: (1) secondary data collected by the South Carolina Area Health Education Center (AHEC), the state of South Carolina, and family practice residency training programs; (2) primary data collected from physicians practicing in underserved areas and students graduating from South Carolina medical schools who are entering family medicine residencies.

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Secondary data sources.

The number of physician shortage areas was obtained through the DHEC Primary Care office. These include 18 counties, two counties outside the urbanized area of the county seat, and partial areas in 18 counties including urban underserved areas. Data for family practice graduates locating in any of these areas were obtained from South Carolina AHEC reports from 1987-1992. These reports generated a practice location, if known, for residents completing family practice training in the state of South Carolina. After 1992, AHEC no longer collected actual sites of practice and collected only composite figures from residencies for in-state versus out-of-state locations for practice.

TABLE 1. Physicians working in underserved areas in South Carolina

		N = 201
Race		
	White	166 (83%)
	African-American	7 (3%)
	Hispanic	1 (1%)
	Other	14 (7%)
	No answer	13 (7%)
Practice activity		
	Full-time practice	148 (74%)
	Part-time practice	15 (7 %)
	Retired	32 (16%)
	No answer	8 (4%)
Reason for entering underserved practice		
	Hometown/family connections	72 (45%)
	Liked rural area	65 (40%)
	Job market pressure	10 (6%)
	Obligation	6 (4%)
	Preferred rural lifestyle	5 (3%)
	Better income	2 (1%)
	Just crazy	1 (1%)

Primary data sources

Physicians in underserved areas.

To assess the population of physicians who practice in underserved areas and their likelihood of leaving the area in the next three years, a survey was sent to all 341 physicians who were listed in the state physician directory as practicing in South Carolina HPSAs; nine of these were returned undeliverable, leaving a sample of 332. The survey asked physicians to indicate reasons for locating in an underserved area, their likelihood of leaving in the next three years, and, if considering leaving, why they would be leaving practice. Demographic

TABLE 2. Physician specialty and likelihood of leaving within next 3 years

Specialty	N (% of total)	Over age 60 (%)	Likely or very likely to leave in next 3 years
Family practice	102 (51%)	41 (40%)	21 (21%)
Other primary care*	30 (15%)	6 (20%)	2 (7%)
Other	69 (34%)	36 (52%)	9 (13%)
TOTAL	201	118 (59%)	33 (16%)

* General medicine, pediatrics, OB/GYN
(under age 60 -- p=0.01)

TABLE 3. Reasons given for likelihood of leaving

	(n= 34)
Retirement	19 (56%)
Workload/lifestyle	6 (18%)
Obligation completed	3 (9%)
Market changes	3 (9%)
Family reasons	1 (3%)
Low salary	1 (3%)
Death	1 (3%)

and specialty information were also collected. Responses were obtained from 201 (61 percent) of the physicians in this group.

New graduates in family practice.

Since medical school data indicated that significant proportions of South Carolina-educated students selected residency programs outside the state, we surveyed all medical school graduates from the 1998 class to determine what factors influenced their selection of a family practice residency. We asked whether applicants matched at their top selection and if not, if that top choice had been an in-state program or out-of-state program. We also provided selected reasons why the student would have chosen to stay in-state or out-of-state and allowed students to provide other responses as well. Responses were obtained from 26 (70 percent) of the graduating students at MUSC and USC entering a family practice residency program.

RESULTS

Stability of physician supply in underserved areas

Of the 201 physicians who replied to our survey, 82 percent were in active practice and 16 percent had already retired (Table 1). The overwhelming majority of those who were in practice worked full-time. When asked about why they had chosen to work in an underserved area, the most common responses were that the area was either the physician or their spouse's home town (45 percent) or that they always wanted to work in an underserved area (40 percent). Job market pressures forced a small number of physicians to work in underserved areas; interestingly, these physicians tended to be non-primary care physicians (six out of ten). Loan replacement obligation accounted for only a small percentage of individuals who worked in these areas and most of these indicated a high likelihood of leaving when their obligation was completed.

Table 2 shows the number of physicians by specialty and their indication that they would leave within the next three years. Family physicians account for about half of the physicians in underserved areas with non-primary care specialty physicians accounting for about two-thirds of the remaining doctors. These two populations are senior in age with 52 percent of non-primary care doctors and 40 percent of family physicians over the age of 60. Though the non-primary care physicians were more likely to be over the age of 60, they were less likely to indicate that they would be leaving the area in the next three years.

Finally, Table 3 shows the reasons given by physicians who indicated they

TABLE 4. Medical students entering family practice in 1998

	Stayed in-state for residency (N=14)	Left state for residency (N=12)
Matched at first choice	12 (86%)	10 (83%)
Reason for choice:		
Wanted to stay/leave state	8 (57%)	2 (17%)
Wanted to stay in-state but did not match	0	1 (8%)
Best program regardless of location	4 (29%)	3 (25%)
Spouse/partner	1 (7%)	2 (17%)
Other reason	1 (7%)	3 (25%)

would likely be leaving in the next three years. Retirement was the most common reason that physicians would be leaving practice, although 18 percent of the respondents cited workload and lifestyle issues as the most important factor that was influencing their anticipated departure.

New physician supply

In the six years that data were available (1987-1992), the family practice residencies graduated a total of 339 family physicians. One hundred eighty (53 percent) of these remained in South Carolina for their initial practice. Only a small number of new family practice physicians located their practices in underserved areas, though. During this six year period, 17 graduates indicated joining or starting a new practice in a South Carolina HPSA. This ranges from highs of six residents in 1990 and 1991 to none in 1989. Taking this rate over the six years produces an average of 2.7 physicians locating in HPSAs per year or only five percent of the total graduates of family practice residency programs in the state.

The other potential source for future physicians in underserved areas are residency graduates who grew up in South Carolina. During the 1998 match, 36 students from MUSC and USC chose training in family practice. Of the 26 who replied to our survey, 14 were training in South Carolina residencies and 12 in out-of-state residencies (Table 4). Twelve (86 percent) of those who remained in state received their first choice in the match and ten (83 percent) of those who entered programs out-of-state received their first choice. None of the students who remained in-state had preferred an out-of-state program and only one student who entered training out-of-state had a first choice that was an in-state program.

The most common reason for selecting a program among students who elected to stay in-state was a desire to train in South Carolina. Students who left South Carolina for residency had a variety of reasons for selecting their residency. A quarter believed the program in which they matched was the best program (25 percent), while about a third either wanted to leave the state or left because of a commitment to their spouse or partner.

DISCUSSION

These data paint a rather bleak picture for physician supply in underserved areas of South Carolina. Data from those who practice in these areas suggest that about ten physicians per year will be leaving practice with the majority of these being family physicians. Though more of the contingent are over age 60, fewer non-primary care physicians in underserved areas state that they are likely to be leaving in the next three years. Second, the major factor influencing physicians to leave, which is retirement, is not amenable to interventions that could improve access to primary care services in these underserved communities.

It is also clear that unless the historical trends in practice locations of new primary care physicians changes, there will be an inadequate supply of new physicians to replace these retiring doctors. New family physician graduates are moving into these areas at very low rates. Despite 60 new family doctors per year finishing their residency in the state of South Carolina, only two to three end up in underserved communities. Rather than reducing the underserved areas in the state, we are likely to go from bad to worse.

In general, the medical schools in South Carolina are doing an above-average job in accepting and training medical students who choose primary care career. The last three year average for students electing family practice at MUSC (21.6 percent) and USC (21.3 percent) (Kahn, et al), places the two South Carolina medical schools 26th and 28th among the countries 124 medical schools. However, many of these students appear to prefer training programs outside South Carolina. Expanding residency positions in South Carolina to accommodate these students is unlikely to be cost-effective since over a third of those who entered out-of-state programs indicated they selected an out-of-state program specifically to leave South Carolina or left because of a partner commitment. Rather, focus on improving the quality of the residency experiences in South Carolina would have a greater impact on luring students who left because of their perception that an out-of-state program was better.

Other policy implications are suggested by these data. First, underserved physicians tend to either go back to where they came from or envision practicing in an underserved area early in their career.

This suggests that concentration on the admissions process on individuals with either this background or avocation would have the greatest impact on future physician supply. Second, loans and other inducements that obligate physicians to practice in underserved areas appear to be no more than temporary solutions to a chronic problem. Of those who are practicing in underserved areas, very few arrived because of an obligation and those who are in these areas now indicate that they are unlikely to remain. Finally, increased medical student or residency experiences in underserved areas may allow students and residents exposure to opportunities that they otherwise might have some impact. The second most common reason given for practicing in an underserved area was that the physician found it an attractive place to work and live. If students and residents do not receive rural health experiences during their training, they may discover the attractiveness that others have appreciated.

Finally, market forces may contribute to changing physician distribution. As noted in our survey, a small percentage of physicians located in rural areas because of market forces (better pay, only job available, had to follow their spouse, etc.). Only one of these individuals was a family physician and three others (two pediatricians and one general internist) were primary care doctors. However, for the past two decades approximately 60 new family physicians finish their residency and about 30 per year remain in South Carolina to practice. The majority of these individuals stay in the areas in which their residencies are located. A saturation of these urbanized markets by recently trained family physicians may force more primary care doctors to locate in less populated areas in the next decade.

These conclusions must be considered in light of the limitations of the study. First, data on underserved areas may not reflect the absolute need for physicians or services in these areas. If physicians locate in town or counties in close proximity to an underserved area but not actually in the county, services may still be more accessible. Second, data available to track exact locations of residency graduates was several years old. Changes in market forces may have already influenced practice locations for new resident graduates. More recent composite data that is available does not show any significant change in family practice graduates tendency to enter practice in-state versus out-of-state, though; between 1993 and 1997, the percentage of graduates remaining in state has stayed fairly constant ranging between 47 percent and 59 percent. Finally, data from the medical student survey must be interpreted cautiously. A small number of students were available from only one year of experience; the experiences of this small group may not be indicative of previous years' graduates or future trends.

In summary, medically underserved areas in South Carolina may grow in need during the next few years as older physicians retire, younger physicians leave underserved areas, and few replacements arrive. The two medical schools in South Carolina are in the upper quartile of producing family physicians, but many of these graduates pursue training in other states. Nearly half of all family practice residency graduates in South Carolina also leave the state for practice opportunities elsewhere. A greater emphasis on recruiting students and residents from underserved background and providing additional training in rural medically underserved areas may be useful in reversing these trends, but this will take many years to have an impact. Further tracking of these data will be valuable in assessing the impact of policy and market changes physician supply and distribution and instituting policies that are likely to address those with the least access to health care in the state. ❑

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Editorials

LIVE AS THOUGH SEEN

Baltasar Gracián, a worldly Jesuit priest who lived in Spain during the 17th century, wrote 300 pithy epigrams known collectively as the *Oracle* or *Art of Worldly Wisdom.* The *Oracle* contains common-sense advice for just about any situation. Each time I see a new edition of Gracián, I buy it. If I had the time and money I'd try to acquire a copy of every edition ever published, as William Osler did of Sir Thomas Browne's *Religio Medici.* However, this editorial is not about book collecting. It's about a murder trial.

Gracián's epigram number 297 reads: "Live as though seen." Or, as one of my editions has it: "Always behave as though others were watching." We seem programmed to learn, un-learn, and re-learn this simple admonition. Indeed, our national issue-of-the-day reminds us how even the high and mighty should keep it close to their hearts! An updated version of number 297 might read: "Live as though being constantly videotaped," like the character played by Jim Carrey in *The Truman Show*. Alas, the cameras in the video poker parlor weren't working the night the security guard was slain during a bungled robbery.

Few of us welcome the summons to jury duty. The loss of our most precious commodity—time—is only partially offset by the vague sense that we have somehow contributed to our system of justice. I had been summoned to the Circuit Court's last session of the calendar year. Knowing that they seldom call physicians, and almost never call persons wearing bow ties, I came prepared. Reporting to the jurors' room, I staked out a table, opened the attaché case, and settled in for a fine week of paperwork.

First came the preliminaries. We were herded into a large courtroom where our names were called as the lawyers made notes. Several people said they had medical conditions. The judge asked whether they had physicians' statements. They said no and were asked to stay. One woman said her husband was a prisoner-for-life in another state and that she could never convict anyone because our legal system is so corrupt. The judge said he understood but would require her presence in the court the entire week. She was escorted out of the room kicking and screaming. The psychiatrist sitting next to me confided the likely diagnosis and the probable circumstances of her marriage to the inmate.

Next came jury selection. I was among about 50 people asked to report to the criminal court. We were told that the case involved an early-morning-hours slaying of a security guard. My name was drawn from the rotating drum. I stood up before the lawyers and announced my occupation, confident that I would soon be back at the desk in the jurors' room. Amazingly, neither side struck. Sitting dumbfounded in the jury box, I stared at the rotating drum. I admired its miter joints. It seemed to be made of walnut.

A while later we were told the alleged circumstances of the case. One of two robbers had held a gun to the security guard. The guard resisted whereupon he was shot. The second robber ripped the guard's gun from his holster and shot him several times. He died instantly. Since the video cameras weren't working, the evidence would be mainly from various witnesses. The defense attorney, who did a fine job with the facts at his disposal, told us that all of the evidence presented would be flawed.

Struck with the seriousness of deciding on another human's liberty, I put aside all other concerns. I learned or re-learned things I'd rather not know. I learned the meaning of the phrase "do a lick." I learned about the national crime network and about computer-generated lineups. I learned the subtle differences between such terms as direct and indirect testimony, larceny and robbery, pistols and revolvers, bullets and cartridges, exit wounds and entrance wounds, latent and known finger-prints. Concentrating as hard as I could, I noted my pulse rate to be about 20 beats per minute faster than usual. Indeed, for the next four days my nervous system behaved as though I were hovering indefinitely over a four-foot downhill putt. I was largely oblivious to the bombing of Iraq and the impeaching of the President.

Elected foreman by my fellow jurors, I resolved to do the job as I'd always envisioned doing it. The night before the closing arguments, I prepared for each juror a table with the evidence as I'd seen it, allowing plenty of room for them to make their own notes. I prepared identical sets of 20 ballots, each marked "yes," "no," "abstain," and "I would like to have the following evidence discussed." I bought two boxes of Pentel® roller ball pens. I prepared 12 index cards listing all of the jurors. I would obtain everyone's participation and allow nobody to dominate. All views would be brought out and respected.

We began our deliberations the next morning with a long moment of silence. Then I explained that—assuming they by and large agreed with the procedure—we would vote and list our concerns in private to the fullest extent possible. We would rotate the role of moderator, whose task would be to call on each juror for his or her opinion on the issue in question. I appointed someone to shuffle the ballots, someone to serve as secretary, and someone to write on the blackboard. Then we began our four and one-half hours of uninterrupted focus.

Did it work? Yes. Was it tense? Yes. Did anyone lose composure? No. Did I eat a single bite of the chicken salad sent in from Lizard's Thicket? No. Did my signature on the guilty verdict look like my usual signature? No. It was compatible with advanced Parkinsonism or hepatic encephalopathy.

Did I learn anything? Absolutely. A renewed sense of confidence in our judicial system—imperfect, like all human institutions, but probably as good as any and better than most. A renewed respect for lawyers and judges and for those who work in courthouses. A renewed ability to listen and to respect divergent viewpoints. And a renewed gratitude to be in a profession where the basic orientation of everyone is not conflict but rather helping a sick person get well.

Let us return to Baltasar Gracián and epigram number 297.

The defendant nearly went unrecognized. But when the guns were going off and nearly everyone in the video poker parlor was ducking and hiding, one employee came out of his room and moved toward the assailants. His mother, it turned out, was working in the room next to where the shooting was taking place. He got a good look at the defendant. He recognized him as a fellow inmate from a former incarceration. He remembered mixing with him, lifting weights with him, showering with him. He remembered that the defendant bore a tattoo of a smoking gun on the left side of the chest. Ironically the anatomic location of the tattoo corresponded to the victim's fatal wound. Two bullets had destroyed the atria of his heart.

Live as though seen.

I can think of at least three ways to apply this simple admonition.

First, there is the theistic basis for normative ethics, the transcendent Ought. God is watching. Nothing we do goes unseen.

Second, there is the pragmatic basis for everyday behavior, the likelihood that what we do can and will be seen someday, somewhere, by someone. There is always the possibility of being seen.

Finally, there is the high moral ground for the way we should practice medicine, accountable not only to our patients but also to our profession. I especially like the image used by Dr. Hunter Stokes of Florence during his career as an ophthalmic surgeon. Hunter resolved early on to imagine that a medical student was always stationed right behind him, looking over his left shoulder. The image served him well. Imagine that everything you do is seen, and by discerning eyes.

Live as though seen.

—CSB

On the Cover:

OLIN BURNHAM CHAMBERLAIN, M. D. (1892-1968)

The 1946-1947 president of the South Carolina Medical Association was born in Charleston and attended the High School of Charleston and the College of Charleston graduating from the latter in 1914. He played football for the College of Charleston and because of his large size acquired the nickname "Bear." He was first honor graduate of the Medical College of the State of South Carolina in 1918 and did residency training at Philadelphia General Hospital and Roper Hospital. In 1920, he entered private practice, and also served as acting professor of biology at the College of Charleston where he later he taught Psychology as well. Dr. Chamberlain developed a special interest in nervous diseases and did postgraduate work at the National Hospital for the Paralyzed and Epileptic in London and Harvard University Medical School. He became an assistant professor of medicine at the Medical College in 1929.

During WWII he served in the Army Medical Corps and was stationed at LaGarde General Hospital in New Orleans, Louisiana, with the neuropsychiatric service and Bushnell General Hospital, Brigham City, Utah as chief of neuropsychiatric service. During the war he also served as technical medical advisor for Metro-Goldwyn-Mayer which was producing medical educational films with Walt Disney. The films were intended for medical officers, nurses and attendants rather than the general public. Disney was asked to do the films in animation because it was easier to show gaits and facial expressions characteristic of neurotic patients by animated pictures than by using actors. Using real patients would violate their privacy.

Dr. Chamberlain returned to the faculty of the Medical College in 1946 as a professor of neuropsychiatry, and the same year was named president-elect of the South Carolina Medical Association[1]

Dr. Chamberlain was described as "robust and powerful though agile and graceful in his movements,"[2] "a man of extraordinary intelligence and ability combining a keen mind with a lively sense of humor and affable personality. As he became involved in the newer developments in psychiatry he kept his feet firmly on the ground, giving much sound help to his many appreciative patients. . . . He was a man of the outdoors, a welcomed member of any group, social, professional, or literary, and a true student of his profession."[3]

Jane McCutchen Brown, Curator
Waring Historical Library

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Alliance Page

MEMBERSHIP

Currently, the South Carolina Medical Association Alliance membership is over 1,500 with a strong representation in 22 counties. As we prepare to enter the millennium, Mrs. Shirley Meiere (Mrs. Cheney M.) of Florence, our incoming president, has as her goal "2000 Toward 2000." Our members have been diligently supporting physicians and communities through health related projects in their counties.

Alliances throughout the palmetto state are involved in various ways and I would like to take this opportunity to list a few of these to you. Monies are raised each year for the AMA Foundation (formerly AMA-ERF) and last year was unparalleled with $38,602.25 being presented to our two medical schools. Dr. James Spann, Associate Dean of MUSC and Dr. Larry Faulkner, Dean of USC School of Medicine were presented checks at our Annual Convention in April in Charleston. Projects such as Sharing Cards, Doctors' Day events and raffles made up this donation. In addition to these projects, our members support local women's shelters, supply Teen Direct Line Cards, emphasize elder abuse, do related projects in conjunction with the AMAA's focus on SAVE Day, Stop America's Violence Everywhere, and many other projects which space limits mentioning here.

We are fortunate to have the American Medical Association Alliance close at hand, working with us and affording us opportunities to attend Confluence I & II in Chicago each year. These meetings are filled with spectacular lectures and hands-on committees to guide us with ways to continue to offer our states excellence in our volunteer endeavors. County presidents and president-elects are eligible to attend these informative sessions. Make sure your spouse takes advantage of this golden opportunity.

I would ask each physician who has taken the time to read this article to do something for me. If your spouse is a member of the local alliance and/or SCMAA, please take the time to say "thank you" for her/his dedication to the support of the practice of medicine. If they are not currently members, I urge you to encourage their participation in the one unified voice for medicine in our state and in our counties. Together we do make a difference.

I strongly believe we can increase our existing membership with communication of what we are about! We need each and every spouse to help us continue our fine tradition of working for the people of South Carolina, spreading the good news of medicine, and offering friendship and support to each other during these changing times. If your county does not have an active alliance, please contact me or someone with the SCMA office and we will happily assist you in establishing a group. Let's take the challenge— "2000 Toward 2000."

Gail H. Delaney (Mrs. Gary A.)
Vice-President and Membership Chairman

Classifieds

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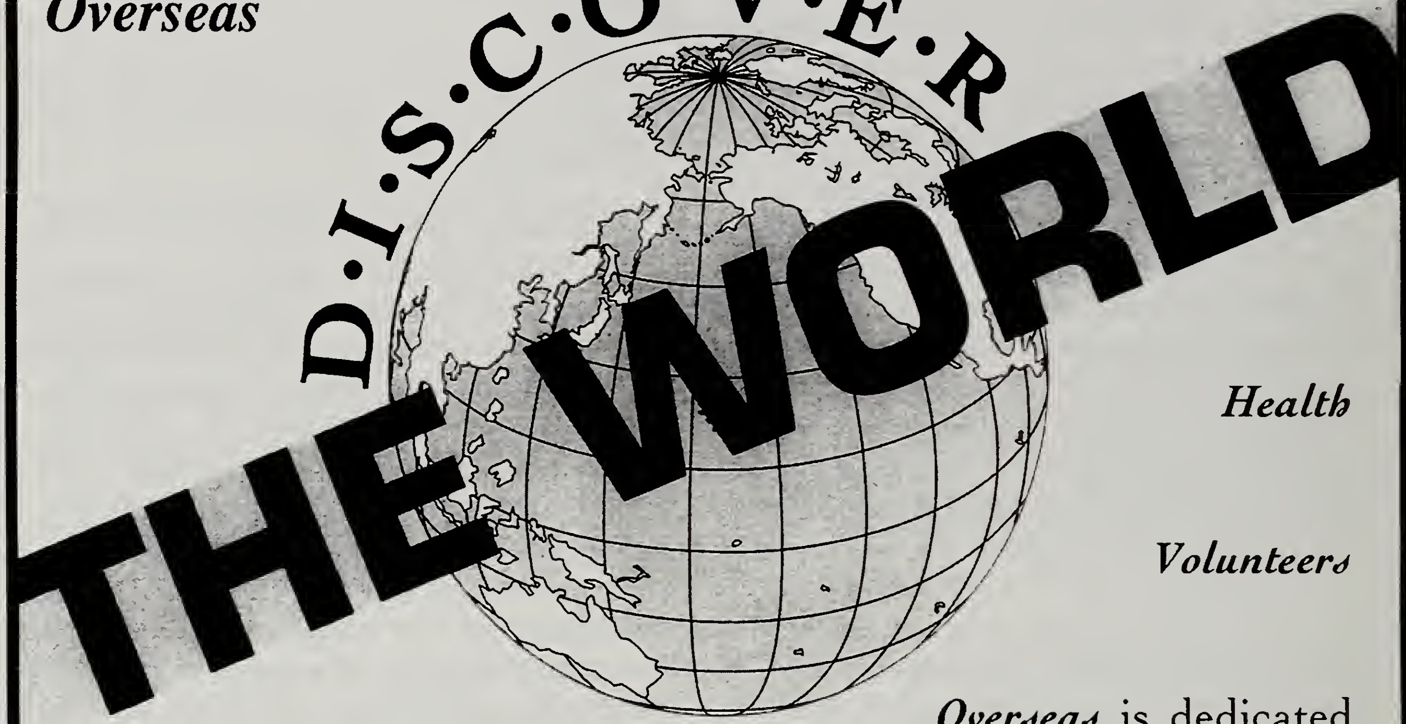

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

UPDATE ON DISABILITY INSURANCE

There have been dramatic changes in the disability insurance industry over the past five years. During this period, actual claims experience far exceeded the claims that were anticipated when the products were priced. Thus, reserves and premium flows were insufficient to pay expenses.

The result of this pricing inadequacy has been traumatic for those insureds whose disability insurance was provided by contracts that allowed the premiums and coverage to be adjusted. For these policyowners, here's what has happened:

- *in some cases, coverage has been canceled*
- *premiums have been sharply increased, sometimes to levels double or triple those that were projected*
- *restrictions of various types have been placed on the coverage*
- *there have been severe cut backs on issue and participation limits*

The suffering from the above changes is being experienced by all disability policyowners except those who own individual, non-cancelable disability policies. Because these contracts guarantee that premiums can never be increased and that benefits can never be restricted, these policyowners are receiving exactly what they anticipated.

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SPECIAL ISSUE: RACIAL ISSUES IN HEALTH CARE

GUEST EDITOR: KRISTY MAHER McNAMARA, Ph.D.

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President's Page

THE GIFT THAT LIVES ON?

Physicians are an integral and important part of the American organ and tissue transplantation system.

Skin, corneal, and kidney transplants have been available for many years and have provided the living laboratory for our current understanding of and advancements in transplant science and technology. We are now performing previously unheard of transplants of the liver, pancreas, intestine, heart, and lung. Physicians are the heroes here—we perform the necessary surgeries; we comfort and guide the affected patients awaiting transplants; and we guide the research into better technologies and biomedicine.

Unfortunately, the expectation and demand for transplants has outstripped the supply. In 1997, according to the UNOS (United Network of Organ Sharing—currently running the Procurement and Transplantation Network of Organs for the U.S. Federal Government) registry, there were 9,286 donor organs recovered (5,477 cadaver and 3,809 living). In 1999, there are 64,580 patients awaiting a transplant on the UNOS national patient waiting list.

At the December 1998 meeting, the AMA started a major effort to increase the public and physician awareness of this great organ need. The campaign is being called "Live and Then Give" and encourages physicians themselves to sign organ donor cards and talk to all their patients about organ donation. We certainly DO need to raise the available supply of organs—an average of 12 people in the United States die each day awaiting a transplant.

Physicians have also involved themselves in the new debate within the federal government concerning how the patient waiting list is managed. Is it fairer to have a national waiting list weighted as to severity and chance of success or is a local waiting list for local organs the best way? Many transplant surgeons favor the current "local" situation because of lower transport times and communication ease.

Are you a donor? Call the SCMA office now and we will provide donor cards for you, your staff, and your patients.

Stephen

Stephen A. Imbeau, M. D.
President

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March 1999

MEDICARE UPDATE

Fraud Alert: Physician Liability for Certifications in the Provision of Home Health Services and Durable Medical Equipment

The Office of Inspector General (OIG) was established at the Department of Health and Human Services by Congress in 1976 to identify and eliminate fraud, waste, and abuse in the Department's programs and to promote efficiency and economy in departmental operations. The OIG carries out this mission through a nationwide program of audits, inspections, and investigations. OIG Special Fraud Alerts address national trends in health care fraud. The OIG issues Special Fraud Alerts based on information about particular fraudulent or abusive practices within the healthcare industry.

The OIG actively investigates fraudulent schemes that obtain money from Medicare and Medicaid and, when appropriate, issues special Fraud Alerts that identify segments of the health care industry that are particularly vulnerable to abuse. The OIG issued this Fraud Alert because physicians may not appreciate the legal and programmatic significance of certifications they make in connection with the ordering of certain items and services for their Medicare patients.

While a physician's signature on a false or misleading certification made through mistake, simple negligence, or inadvertence will not result in personal liability, the physician may unwittingly be facilitating the perpetration of fraud on Medicare by suppliers or providers. All physicians are urged to review and familiarize themselves with the information in this Fraud Alert. *If you have any questions as to the application of these requirements to specific facts, please contact the Palmetto Governments Benefits Administrators, LLC, Customer Service Center at (803) 788-5568.*

The Importance of Physician Certification for Medicare

The Medicare program only pays for health care services that are medically necessary. In determining what services are medically necessary, Medicare primarily relies on the professional judgment of the beneficiary's treating physician, since he or she knows the patient's history and makes critical decisions, such as admitting the patient to the hospital; ordering tests, drugs, and treatments; and determining the length of treatment. In other words, the physician has a key role in determining both the medical need for, and utilization of, many health care services, including those furnished and billed by other providers and suppliers.

Congress has conditioned payment for many Medicare items and services on a certification signed by a physician attesting that the item or service is medically necessary. Physicians also are involved in attesting to medical necessity when ordering services or supplies that must be billed and provided by an independent supplier or provider. Medicare requires physicians to certify to the medical necessity for many of these items and services through prescriptions, orders, or, in certain specific circumstances, Certificates of Medical Necessity (CMNs). These documentation requirements substantiate that the physician has reviewed the patient's condition and has determined that services or supplies are medically necessary.

Physician Certification for Home Health Services

Medicare will pay a Medicare-certified home health agency for home heath care provided under a physician's plan of care to a patient confined to the home. Covered services may include skilled nursing services, home health aide services, physical and occupational therapy and speech language pathology, medical social services, medical supplies (other than drugs and biologicals) and DME. As a condition for payment, Medicare requires a patient's treating physician to certify initially and recertify at least every 62 days (2 months) that:

- the patient is confined to the home;
- the individual needs or needed:
  1. Intermittent skilled nursing care;
  2. Speech or physical therapy or speech-language pathology services; or
  3. Occupational therapy or a continued need for occupational therapy.*

The physician must order the home health services, either orally or in writing, prior to the services being furnished. The physician certification must be obtained at the time the plan of treatment is established or as soon thereafter as possible. The physician certification must be signed and dated prior to the submission of the claim to Medicare. If a physician has any questions as to the

—continued on page 4

COMMUN-I-CARE:
RESOURCES FOR MEDICAL COMMUNITY AND THE UNINSURED

For many of the working poor, without health insurance or government assistance, the choice may come down to seeing a doctor or paying the rent, buying their insulin or buying groceries. Commun-I-Care works to make sure everyone has access to good health care. They do it with the volunteer support of health care providers and pharmaceutical companies.

Volunteer providers across South Carolina offer to see Commun-I-Care patients in their offices at no charge. Once a prescription is written, Commun-I-Care patients can get it filled by a volunteer pharmacist. Eli Lilly, Johnson & Johnson, Searle, and Pfizer provide their product lines for free.

For patients like Barbara Chandler of Sumter, Commun-I-Care "has been a godsend." Chandler works as a nurses' aide at a rest home but without health insurance, there was no one to help her get the treatment she needed for her diabetes. So sick she couldn't go to work, Chandler wound up in the emergency room and there she learned about Commun-I-Care. Now Chandler gets her insulin for free and sees a doctor when she needs one, through Commun-I-Care's network of services. She is able to go to work and to stay out of the emergency room.

Commun-I-Care not only succeeds in bringing better health care to individuals, it also saves money. Doctors and pharmacists have long been frustrated when patients cannot afford to comply with prescriptions. By making prescription drugs available to patients, Commun-I-Care and its supporting pharmaceutical companies make follow-up treatment possible.

Commun-I-Care is also succeeding at keeping non-emergency patients out of emergency rooms. One partner hospital reports that by registering uninsured patients with Commun-I-Care, they have been able to cut down on non-emergency room return visits by 50 percent.

"Everyone wins when we can provide alternatives," said Commun-I-Care director Ken Trogdon, "Doctors see the patients they are best trained to see, hospitals save hundreds of thousands of dollars, and patients improve their health with good preventive care."

Patients can register for Commun-I Care by calling 1-800-763-0059. The registration process is simple. Health care providers who want to volunteer or to learn more about Commun-I-Care can call (803) 933-9183.

communicare
Putting Health Care in Reach

ESTABLISHING AN INTERNET CONNECTION
PART 2 - CHOOSING THE TYPE OF CONNECTION YOU NEED

In an earlier article, we discussed choosing an Internet Service Provider for your Internet access. Another important decision to make is the type of connection you will need to establish for your practice. Internet service providers offer many types of connections including dial up accounts and dedicated connections. How do you determine which type of connection is best?

To determine this, analyze the amount of time spent online and the number of staff accessing the Internet individually and simultaneously. If only one or two individuals use the connection occasionally throughout the day, you may be able to get by with a standard dial-up account that averages $20.00 monthly. A dial-up account is a connection to your ISP with the modem in your computer, usually a 28.8, 33.6 or a 56K modem. When you need to surf the 'net, you simply "dial-up" your ISP and they connect you (sometimes quickly, sometimes not so quickly). The obvious drawback is the time spent connecting and only one person may log on at a time. If more than one connection is made (for instance, the physician logs on from his/her computer and the office manager logs on from his/her computer at the same time), you are charged for the double time spent online. The advantages in having a dial-up connection are that it is inexpensive and easy to set up, requiring no additional equipment other than your computer and modem. The only type of telephone line needed is a standard analog line coming into your practice. Some practices use their fax line as an Internet connection and a fax line.

If, however, you need multiple mailboxes, have multiple individuals online simultaneously, need a full-time connection to the Internet, provide Internet access to employees for remote access or spend a significant amount of time online, then a dedicated connection may be best. A dedicated connection to your ISP usually requires a different type of phone line for more bandwidth. An Integrated Services Digital Network (ISDN) line may be all that is needed. Check with your phone company for pricing and options. Pricing for a dedicated line connection to your ISP varies depending on the bandwidth you request and starts at about $250 monthly.

If your needs fall somewhere in between a casual user with a dial-up account and a power user with a dedicated line, then an ISDN dial-up connection may suit your needs. It is a digital telephone service that

—continued on page 3

CANDIDATES FOR SCMA OFFICES

OFFICERS

President-Elect

Elected annually. *Roger A. Gaddy, MD,* has expressed interest in serving as President-Elect.

Secretary

Elected annually, limited to three consecutive terms. *Richard E. Ulmer, MD*, elected 1998. Eligible for two additional terms. Seeking re-election.

Treasurer

Nominated by the Board of Trustees. Elected annually, limited to three consecutive terms. *J. Capers Hiott, MD*, elected 1997, re-elected 1998, eligible for one additional term. Seeking re-election.

Speaker

Elected bi-annually, limited to three consecutive two-year terms. *Roger A. Gaddy, MD*, elected 1993. Not eligible for re-election. Seat open. *Robert M. Sade, MD*, has expressed interest in serving as Speaker of the House.

Vice-Speaker

Elected bi-annually, limited to three consecutive two-year terms. *Robert M. Sade, MD*, elected 1996 to fill unexpired term of William H. Hester, MD, re-elected 1997. Eligible for two additional terms. Not seeking re-election. *Linwood Bradford, MD, James J. Hill, MD*, and *Andrew J. Pate, MD*, have all expressed interest in serving as Vice-Speaker.

MEDICAL DISTRICT TRUSTEES

District 1

Oswald L. Mikell, MD, elected 1997. Eligible for three additional terms. Seeking re-election.

District 3

John Funke, III, MD, elected 1997. Eligible for three additional terms. Not seeking re-election.

District 5

R. Duren Johnson, MD, elected in 1993, re-elected in 1995 and 1997. Eligible for one additional term. Seeking re-election

District 7

Gerald Harmon, MD, elected 1997. Eligible for three additional terms. Seeking re-election

Young Physicians Section

March E. Seabrook, MD, elected 1998. Not seeking re-election.

AMA DELEGATES AND ALTERNATES

(All terms expire 12/31/99)

Delegates

J. Chris Hawk, III, MD, elected AMA Alternate Delegate Mid-year 1991 to fill unexpired 1990-91 term of J. Gavin Appleby, MD. Re-elected in 1991 to serve 1992-93. Elected AMA Delegate mid-year 1992 to fill the unexpired 1992-93 term of Randy D. Smoak, Jr., MD. Re-elected in 1993 to serve 1994-95. Re-elected in 1995 to serve 1996-97. Re-elected 1997 to serve 1998-99. Eligible for one additional term. Seeking re-election.

Alternates

John W. Simmons, MD, elected AMA Alternate Delegate in 1991 to serve 1992-93. Re-elected in 1993 to serve 1994-95. Re-elected in 1995 to serve 1996-97. Re-elected 1997 to serve 1998-99. Not eligible for re-election. Seat open.

Stephen A. Imbeau, MD, has resigned as Alternate Delegate and his seat is open for the unexpired term of 1998-99 and a full-term beginning January 1, 2000.

R. Duren Johnson, MD has expressed interest in serving as Alternate Delegate.

—Establishing and Internet Connection, continued from page 2

delivers high-speed voice and data connections over existing telephone lines. With an ISDN connection in your practice, you can connect to the Internet at speeds up to 128k which is 4 times faster than a standard 33k analog modem. A single ISDN connection provides two channels (or phone lines) over a single wire making it the perfect solution for a small practice with multiple devices like fax machines, computers and telephones. And since ISDN connections are faster, the wait time for log on is minimal. The disadvantage is that it does require special equipment not supplied with your computer. An ISDN connection to your ISP will also cost more than a typical dial-up. Expect to pay your ISP as much as $100 per month for this type of connection. You will also need to purchase an ISDN router for your connection to the Internet. Prices for ISDN routers vary but expect to pay at least $200.00.

As you can see, there are many choices in selecting the right type of Internet connection for your practice. If you need additional assistance in choosing the connection that is right for your practice, call your local phone company or ISP for help in developing a plan for your practice. In our next article in this series, we will discuss the types of software you will need to enjoy and get the most out of your Internet connection!

For more information, please contact Anne Harvin Gavin at (803) 798-6207, extension 260 or statewide at 1-800-327-1021. You can also send an e-mail message to anne@scmanet.org.

MEDICAID UPDATE

Blood Lead Testing

In cooperation with a recently revised HCFA Directive, as part of a WIC visit, DHEC will collect blood samples for blood lead analysis on all Medicaid eligible children 1 and 2 years of age. This activity will not only provide compliance in meeting HCFA regulations, but will assist in determining the prevalence of lead poisoning in this population. Accurate prevalence data will allow for future targeted screening of only those children at risk.

—Medicare Update, continued from page 1

application of these requirements to specific facts, the physician may contact *Harry Feliciano, MD, Medicare Part A Medical Director, at (803) 788-0222, extension 35007.*

Physician Certification for Durable Medical Equipment

Durable Medical Equipment (DME) is equipment that can withstand repeated use, is primarily for a medical purpose, and is not generally used in the absence of illness or injury. Medicare will only cover DME and supplies that have been ordered or prescribed by a physician. The order or prescription must be personally signed and dated by the patient's treating physician.

Medicare requires claims for payment for certain kinds of DME to be accompanied by a Certificate of Medical Necessity (CMN) signed by the treating physician (unless the DME is prescribed as part of a plan of care for home health services). When a CMN is required, the provider or supplier must keep the CMN containing the treating physician's original signature and date on file.

- Section A contains general information on the patient, supplier, and physician. **Section A may be completed by the supplier.**
- Section B contains the medical necessity justification for DME. This cannot be filled out by the supplier. **Section B must be completed by the physician, a non-physician clinician involved in the care of the patient, or a physician employee.** If the physician did not personally complete section B, the name of the person who did complete it and his or her title and employer must be specified.
- Section C contains a description of the equipment and its cost. **Section C is completed by the supplier.**
- Section D is the treating physician's attestation and signature, which certifies that the physician has reviewed sections A, B, and C of the CMN and that the information in section B is true, accurate, and complete. **Section D must be signed by the treating physician.** Signature and date stamps are not acceptable.

What to Do if You Have Information About Fraud and Abuse Against Medicare or Medicaid Programs

To report suspected fraud, call or write: Department of Health and Human Services, Office of the Inspector General, P.O. Box 23489, L'Enfant Plaza Station, Washington, DC 20026-3489, 1-800-HHS-TIPS (1-800-447-8477)

Beneficiary Fraud Campaign

American Association of Retired Persons launched a nationwide Medicare beneficiary campaign to encourage seniors to look closer at their Medicare billing statements. The AARP teamed up with the Health Care Financing Administration on February 24th to kick-off a campaign to fight Medicare fraud. The videoconference was broadcast from Washington, DC to 30 cities around the United States.

Beneficiaries were counseled to first contact their physician if they have questions about their Medicare statements. Next they should call their local carrier, which is Palmetto Governments Benefits Administrators, LLC in South Carolina. Finally, patients were urged to contact the Office of Inspector General if they believe there is a possibility of fraud and abuse.

In the weeks following the teleconference, you may receive an increase in telephone calls from your Medicare patients to your office with billing questions. The American Medical Association has developed talking points for your office that may assist you in dealing with questions from patients arising from the event.

If you would like a copy of the AMA's talking points for physicians or a copy of the OIG's Fraud Alert about home health and DME in its' entirety, please contact Kelly Danias at (803) 798-6207, extension 236, statewide at (800) 327-1021, or via e-mail at kelly@scmanet.org.

PHYSICIANS CARE NETWORK UPDATE

PCN is expanding its coverage area. Effective January 1, 1999, PCN contracted with the Charlotte-Mecklenburg Hospital Authority (Carolinas HealthCare System) in North Carolina. This adds nine (9) hospitals to PCN throughout NC. Currently, there are 6,973 participating physician locations, 780 participating ancillary locations and 96 participating hospitals. PCN has 103 contracted groups with 55,275 covered lives. We will continue to provide information as contracts are received.

NEW GROUPS:

- Lexicode Corporation, Inc.; Ballentine; effective 1/1/99; Access/Inpatient UR.

Instrument Control Service, Inc. terminated effective 1/1/99. Linde Lift Truck Corporation (formerly Baker Material) terminated 2/1/99. Carolina Colors (Ace Textiles) terminated 3/1/99.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, PCN at (803) 798-6207, extension 257 or statewide at 1-800-327-1021. You can also send an e-mail message to cindy@scmanet.org.

The SCMA's Annual Meeting and Scientific Assembly is scheduled for April 29-May 2, 1999, at Charleston Place Hotel, Charleston, South Carolina. ***If you have not preregistered for the meeting, don't delay. Register NOW!***

The Journal
OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 95 MARCH 1999 NUMBER 3

SPECIAL ISSUE: RACIAL ISSUES IN HEALTH CARE

INTRODUCTION

KRISTY MAHER McNAMARA, PH. D.*

A recent front page story in an upstate newspaper highlighted how the black-white health gap is "taking an awful toll" in South Carolina.[1] The facts about black mortality in South Carolina are deeply disturbing. From the earliest stages of life, racial disparities in health can be seen. Black babies in South Carolina are twice as likely to die as white babies. This trend continues throughout their life course. As stated by the author of the article ". . . blacks in South Carolina die from a range of illnesses far more often — and at younger ages — than whites." For example, adult African-Americans are twice as likely as whites to die from stroke; high blood pressure is four to five times as likely to kill them as their white counterparts; and African-Americans are two to three times more likely to die of diabetes, a disease that can be managed with medications, diet and exercise. While the racial disparity in health in South Carolina may seem surprising, the situation is not unique to our state. This uneven health profile exists all across America. In fact, it is one of the most consistent patterns documented in the field of medical sociology.

This issue of *The Journal* is dedicated to exploring issues of race and health. The papers that follow come from the South Carolina Medical Association's Ethics Committee Retreat held in February 1997. The first paper provides an overview of the relationship between race and health in the United States. It not only describes information regarding longevity and causes of death, but it attempts to offer some sociological explanations of why the gap exists. The issue continues with an article by Stuart Sprague, Ph.D. entitled "Community Oriented Primary Care: An Ethical Analysis." This article examines one of the methods currently at our disposal to ensure that health care is more justly distributed, namely Community Oriented Primary Care (COPC). In this article, Sprague urges us to try this approach but cautions us that doing so requires a reorientation of our moral thinking. Albert Keller, D.Min., continues the discussion of COPC in his article entitled "The Practice of Community Oriented Primary Care: An Ethical Appraisal." Here, the Charleston Enterprise/MUSC Neighborhood Health Program is used as an application of the COPC model. Finally, an article by Robert M. Sade, M.D. entitled "Transplantation, the Organ Gap, and Race" explores the special problems the issue of race poses in organ transplantation. After outlining the current dilemma of high need and low supply of organs within the black population, Sade discusses the personal and financial benefits of increasing cadaveric donation by permitting payment for organs.

As mentioned earlier, the racial disparity in health is not unique to South Carolina. . . we are not alone in this inequity. Our state does, however, top the nation in rates of stroke, diabetes and hypertension. The implication is that blacks suffer more in South Carolina than in almost anywhere else in the country. As such, the importance of this issue to health care providers in South Carolina cannot be overstated.

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* Address correspondence to Dr. McNamara at the Sociology Dept., Furman University, 3300 Poinsett Hwy., Greenville, SC 29613.

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1. Hawes JB: Black-white health gap takes awful toll in S.C.: Socioeconomic, genetic factors combine to raise African-Americans' risk of illness. The Greenville News, June 21, 1998; 1, 14A.

THE SKY'S NO LIMIT

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RACIAL DISPARITIES IN HEALTH: A SOCIOLOGICAL ANALYSIS

KRISTY MAHER McNAMARA, PH. D*

TABLE 1—The Average Life Expectancy in Years in the United States by Race and Sex, since 1900

Year	White Males	White Females	Black Males	Black Females
1900	46.6	48.7	32.5*	33.5*
1950	66.5	72.2	58.9	62.7
1960	67.4	74.1	60.7	65.9
1970	68.0	75.6	60.0	68.3
1980	70.7	78.1	63.8	72.5
1990	72.7	79.4	64.5	73.6
1994	73.2	79.6	64.9	74.1

* Includes all nonwhites.

Source: National Center for Health Statistics, 1991, 1996.

". . . the life expectancy of blacks in Harlem is lower than that of persons in Bangladesh, one of the poorest countries in the world." [1]

There are clear and unmistakable differences in the health profiles of racial groups in the United States. Across the country, the infant mortality rates for blacks is twice that of whites. Specifically, data show an infant mortality rate of 16.5 for blacks versus 6.8 for whites.[2] The health gap between whites and blacks is not only seen in infant mortality statistics, but in life expectancy data as well (See Table 1). A comparison of the life expectancy of African Americans and whites shows that blacks have historically been at a disadvantage to whites. Black males are especially disadvantaged with respect to longevity. Table 1 shows that in 1994, the black male had a life expectancy of 64.9 years. This is an average of 8.3 years less than the white male (73.2 years). Additionally, the white female had a life expectancy 5.5 years greater than the black female in 1994.

Underlying the shortened life expectancy of African Americans is a higher prevalence of several life-threatening illnesses, such as AIDS, cancer, heart disease, and hypertension. As shown in Table 2, the death rate from all causes of death is substantially higher for the black population than for whites. Hypertension or high blood pressure is a particularly problematic health problem for blacks. Hildreth and Saunders (1992) note that although blacks constitute 12 percent of the United States population, they have more than 28 percent of the diagnosed hypertension cases.[3] Between the ages of 25 and 44 years, hypertension kills black males 15.5 times more frequently than it does white males. The ratio of black to white females dying from hypertension in the same age category is 17 to 1.

Given this data, it is not surprising that one of the chief contributors to the widening racial gap in longevity is a slower rate of decline of deaths from heart disease among blacks than whites.[4] In addition to heart disease, a close examination of Table 2 demonstrates that blacks lead whites in all causes of death except pulmonary disease and suicide.

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* Address correspondence to Dr. McNamara at the Sociology Dept., Furman University, 3300 Poinsett Hwy., Greenville, SC 29613.

More specifically, black males show higher death rates for each specific cause of death for all racial/gender categories, except for pulmonary disease and suicide (where white males have the highest rates) and diabetes (where black females have the highest rates). Finally, Table 2 displays exceptionally high mortality rates among black males for cancer, heart disease, homicide and AIDS.

A more careful examination of the causes of death documents that under the age of 70, infant mortality, cancer, and cardiovascular disease account for 50 percent of the excess deaths for black males and 63 percent for black females.[5] Homicide accounts for 19 percent of the excess deaths for black males and six percent for black females. These trends are underscored by Cooper (1993), who points out that the black-white health inequality among men reached an all time high for the century in the early 1990s.[6]

These comparisons, however, mask the true story behind racial differences in health. While the tragic picture described above documents a clear racial disparity, it does not explain *why* it occurs. While some attempt to argue that genetics play the primary role in explaining racial differences in health, most medical sociologists argue that diseases that have a clear genetic component (like sickle anemia) account for only a minuscule amount of the racial disparities in health.[7] Additionally, sociologists emphasize that biological explanations tend to divert attention away from social factors that influence the health status of minority racial groups. As such, while genetic components may play a role in the racial disparity in health, the focus of this paper will be on the role of social factors.

Social factors including social class (e.g. education, income), health behaviors (e.g. smoking, drinking alcohol, poor diet), stress, and access and utilization of health care all contribute to the black-white gap in health. Sociological data suggests that social class differences between racial groups are primarily responsible for the observed patterns of racial disparities in health. Research documenting the relationship between social class and health is widespread and consistent — the lower one's social class, the poorer one's health.[8, 9] Many studies have concluded that social class affects the health of infants, children, and adults at least as much, if not more than race or ethnicity.[10, 11, 12] This is largely because race is so strongly correlated with social class in American society. For example, in 1996,

TABLE 2—Age-Adjusted Death Rates for Selected Causes of Death, According to Sex and Race, United States, 1993

Cause of Death	White Males	White Females	Black Males	Black Females
All causes	627.5	367.7	1,052.2	578.8
Heart Disease	190.3	99.2	267.9	165.3
Cerebrovascular diseases	26.8	22.7	51.9	39.9
Cancer	156.4	110.1	238.9	135.3
Pulmonary disease	28.2	17.8	26.6	12.2
Pneumonia and influenza	16.6	10.4	25.9	13.5
Liver disease and cirrhosis	10.8	4.6	16.1	6.6
Diabetes	12.2	10.0	26.3	26.9
Accidents	42.9	16.6	59.8	20.1
Suicide	19.7	4.6	12.9	2.1
Homicide	8.9	3.0	70.7	13.4
AIDS	19.0	1.9	70.0	17.3

* Deaths per 100,000 residents.
Source: National Center for Health Statistics, 1996.

while 11 percent of whites were poor, 28 percent of blacks fell below the poverty line.[13]

Researchers often find that controlling for socioeconomic status (SES) (i.e. a concept used by sociologists to measure social class which includes income, education and occupational prestige) often substantially reduces the racial disparities in health. In fact, in some cases the racial disparity disappears altogether.[11,14] More frequently, however, it is found that adjusting for social class differences substantially reduces but *does not eliminate* racial disparities in health.[6,15]

Lack of insurance, limited income, poor education, and unhealthy living conditions are just a few of the components affecting the health outcomes of poor African Americans in the United States. William Julius Wilson (1996) notes that the social conditions available to poor, urban, isolated blacks, who inhabit the core of the nation's central cities, have worsened. He argues that the rates of unemployment, out-of-wedlock births, households headed by females, dependency on welfare, and violent crimes have increased to their highest levels ever.[16] Under these conditions, it is not surprising that African-Americans are in poor health. Additionally, if poor people suffer from more illness and die sooner than wealthier people, it is not surprising that African Americans, who are overrepresented in the lower social classes of society, have a correspondingly poorer health profile. What is surprising is what is found when comparisons are made *within* socioeconomic levels.

When making these types of comparisons (e.g. middle class blacks to middle class whites), blacks generally *continue* to have worse health status than whites. For example, a study by Schoendorf and colleagues (1992) found higher infant mortality rates among college educated black women than among comparably educated whites.[17] Even more surprising is the finding that the black-white mortality ratio actually increases as social class standing increases. That is to say, the black-white gap is narrowest at the lower socioeconomic levels and highest at higher social class levels. Krieger and colleagues (1993) found, for example, that the black-white gap in infant mortality rates was narrowest among women who had graduated from high school, and highest among women with a college education.[18]

There is no simple or universally accepted explanation for this finding. Many studies suggest that racism plays a key role in the residual effect race has on health.[5, 6, 18] Racism, or negative attitudes and beliefs toward racial groups, and the consequent discrimination that occurs at both the individual and institutional levels, can affect health in a variety of ways. First, race can alter the relationship between SES variables. Take, for instance, the racial differences in average incomes based on the number of years of education. The median income for white males with a college degree was $38,263; while black males with a college degree earned on average $30,532.[19] In this way, education does not fully capture the economic status differences between black and white households. As such, African Americans with advanced degrees may have poorer health (due to fewer financial resources) than whites with comparable education levels.

Racism can also produce greater stress that may have a negative impact on both physical and mental health. Additionally, the impact of racism on health may be indirect, through a greater likelihood to engage in violence and negative health behaviors like drug/alcohol addictions. There is also the issue of restricted access to health care. A study by the Council on Ethical and Judicial Affairs (1990) found that blacks were less likely to receive a wide range of medical services than whites even after adjusting for severity of illness, SES and/or insurance status.[20] Finally, a history of racism in medicine may cause some blacks to avoid seeking health care when it is needed. As we witness the twenty-fifth anniversary of the uncovering of the Tuskegee Syphilis Experiment, it is hard to deny the role that racism has played in the history of medicine. In the light of history, the deep-rooted distrust of the medical profession found among some African Americans is understandable. Unfortunately, this mistrust may have negative ramifications when African Americans choose not to seek health care when it is needed.

The picture painted of the racial disparities in health is not a pretty one. Despite the significant increases in life expectancy for the black population in the twentieth century, the mortality rates for blacks are higher than for any other racial group in American society. Prior to the 1980s, Native Americans appeared to have the worst health profile in American society, but today that position has been taken by blacks.[21] The reasons for the relative decline in the state of African American health are not clear. In order to get a complete picture of the racial disparities in health in the United States, the health profiles of other minority groups (e.g. Hispanic Americans, Native Americans, Asian Americans) would need to be examined, but that is beyond the scope of this article.

In conclusion, there is a clear and persistent racial gap in health in the United States. African Americans live shorter lives and suffer from more illnesses than any other racial group. While social class variations account for some of this finding, a residual race effect remains. There is, however, a glimmer of hope in this bleak picture: efforts are now underway to close the racial gap in health. In February 1998, President Clinton announced a $400 million national effort to minimize (if not eliminate) the gap by the year 2010. The Centers for Disease Control and Prevention have already started the planning process with their efforts focusing primarily on infant mortality, cancer, cardiovascular disease, diabetes, immunization and HIV. Hopefully a shrinking of the racial gap in health will be visible in the near future.❑

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COMMUNITY ORIENTED PRIMARY CARE: AN ETHICAL ANALYSIS

STUART SPRAGUE, PH. D.*

Recent evidence points to the twin conclusions that as a nation we are not the most healthy in the developed world despite large amounts of resources spent and that not all of our citizens benefit equally from our health care advances. One recent study determined that health care resources in this country are allocated in ways that meet the needs of individuals and identifiable racial groups in an uneven fashion.[1] Another study suggests that in spite of spending a larger proportion of our resources than another developed country (Japan) and sophisticated technological advances, certain simple indicators of good health are lower in our country than the other.[2] Derek Bok concluded in a recent book that, "there is no evidence that Americans have gained better health or a better quality of life as a result of the vastly greater per capita (health care) outlays."[3]

In my view, these observations constitute a moral problem. Since health is a social good which should be given a higher priority than many other goods to which our economy is devoted, we fail in beneficence to ourselves to let other social goods be provided while health declines or is not at the level of which we are capable with the resources we are currently spending. We fail at justice to the extent that health care is unevenly distributed among our people based on factors which are not categories of moral worth or personal choice.

If we choose to address this problem, what specific methods are at our disposal which have the potential to raise the level of health of our society and to ensure that the benefits of health care are more justly distributed to all? One such specific strategy is Community Oriented Primary Care (COPC.) Would it work? Would it actually improve the health of our people and guarantee that health care was distributed justly? There is no final way to know that in advance. I would like to suggest, however, that from a moral perspective, it makes sense to try it. It is also clear that to try it in any substantial way will require a reorientation of our moral thinking about medicine.

One advantage of this strategy is that it has a history of application. It has been tried on a limited basis both in this country and in other cultures. Results from these trials indicate that it has the potential to make a positive impact in a way which advances the moral quality of health care delivery. The results also indicate that there are a number of barriers which must be overcome if it is to gain wide acceptance.[4]

Two quotations from recent descriptions of the method give the essential details of the moral issues raised by COPC.

> "The essence of COPC is the acceptance by a practitioner or a practice of responsibility for the health of an identified community beyond the immediate patients seeking cure or relief from acute and chronic diseases."[5]
>
> "COPC requires three essential components: (1) a primary care practice, (2) a defined population, and (3) a process by which major health problems of the community are addressed."[6]

Adopting a COPC approach to the delivery of health care would involve two major moral shifts. One is the acceptance of responsibility for the health of a community rather than the acute and chronic care patients who seek out attention of the medical community for relief of their illnesses. The locus of moral action is dramatically changed to a community rather than a single person. One analogous change has been the conception of the specialty of family practice as treating the entire family rather than simply one person, the patient. But COPC seeks to go beyond the idea of a single family system as the patient. All decisions must be made in light of their implications for the health of

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every member of the community.

This does not mean that intensive treatment of acute illnesses would be abandoned or that technological innovations would be avoided. It does mean that significant resources would be spent on interventions designed to reduce the amount of morbidity and mortality associated with easily preventable causes of acute illness. When that occurs, fewer resources would be available to spend on technology, and some sort of rationing scheme would be in order. Without increasing the percent of our resources spent on health care, we could decrease the amount of morbidity and mortality. That would seem to yield an increase in beneficence on its face.

A different conception of health and illness which goes beyond the traditional approach to acute or chronic disease is also implied by this approach. If the goal of health care is freedom from physical and mental pathology, prevention of illness plays just as significant a role in maximizing health as restoring persons to health after they experience pathology. One overt sign that our current system of health care is not oriented in this way is that providers are able to bill for their services only on the basis of a numerical code for diagnosis of an illness. Going a step further, Smith believes that, "The present system, with its roots in pathophysiology or the disease approach to treatment, has developed primarily for the convenience of the provider of care." [7]

He goes on to argue that medicine has developed in two ways which mitigate against the embracing of a community oriented approach. One he calls "involution," which is the movement toward nonfinancial barriers to care, like centralization of care in campuses removed from the places where the greatest need is. This leads to what he calls "resurrection medicine." The other is "compartmentalization," which is the increasing specialty of providers on parts of the body, leaving the patients to be seen as organ systems rather than whole persons.[7]

Use of COPC would require a reorientation of the moral thinking of providers to see the community as the patient and to see the goal of care as improvement of the health indicators of a group of people rather than the vital signs and the laboratory and imaging studies of one person. They would also have to undertake actions that would not show their effects until months to years later rather than in the space of a few days or weeks. The treatment venue would become the streets rather than the examining room.

It would also require reorientation of the moral thinking of the community to see the improvement of the health of neighbors as an indicator of the improvement of ones own health and to be willing to spend money on interventions that do not have an immediate effect on oneself. We would also have to take responsibility for making lifestyle changes and deal with changing economic incentives to produce and consume less harmful products of commerce.

The other major moral shift implied in COPC is the concern for justice in health care. In a situation of unlimited resources, distributive justice is a moot point. This is not the case in health care today, however. Because our society is reaching the limit of its willingness to devote resources to health care, allocation decisions are now required. COPC offers a way of allocating the resources available in a just manner. Overall health can be improved, but certain providers and patients will not be able to use resources in ways that would be of the most benefit to them personally. If one's highest priority is the community, that should not be a moral problem. Such a trade off may have emotional consequences to particular individuals who would have to forego care they would otherwise have access to.

This will be a major shift in that providers are accustomed to thinking only of the needs of an individual in the examining room or the hospital bed. Patients are accustomed to thinking that their resources will be used only to provide for their personal needs. (Ironically, insurance schemes and cost shifting have been subtly diverting resources from one person to another for a long time. We are not accustomed to seeing it in that way, though.) When COPC is embraced by the community, justice is foremost in a very overt way. Individuals can see that their health is linked to the health of others, and decisions about resources and changes needed can be made openly. Ironically, cost effectiveness becomes a tool in advancing justice in such a system. Autonomy remains, but it is tempered by one's place in the community. Autonomy is maintained in that one makes a conscious decision to share, just as one does when purchasing insurance. Whether it is too idealistic to think that people will be willing to share resources within a particular community in such an overt way remains to be seen with a trial of COPC.

COPC is not without its critics. One critique of COPC in 1989 (O'Connor) argued that implementing COPC was not practical or desirable.[4] His article cited several factors leading to that conclusion. One was lack of persuasive evidence that COPC can improve health outcomes in "nonpoverty" situations. O'Connor argued that no studies exist which document that COPC is more effective than fee-for-service medicine in improving health status. Those studies that do show that COPC improves health are limited to a few diseases and practices and are among people who have limited access to fee-for-service, such as among the poor or in other countries with different types of health care delivery.

The second reason for opposing introduction of COPC is lack of physician interest and training. O'Connor is convincing in this regard. Primary care in an urban setting is declining rapidly. Little time is devoted to studying such issues and methods in the medical education curriculum. His third reason for opposing introduction of COPC is the prevalence of economic and social barriers including lack of reimbursement structures and lack of coordination in patient care in the health care system. Convincing the various payers for medical care such as government, private insurance, and individual users of the health care system to adjust the complex network of incentives and payment patterns to reimburse for COPC activities would in effect require an overhaul of the health care system. This is not likely to occur, as the debate in 1993-94 demonstrated. Also, both physicians and patients are accustomed to a rather fragmented system of seeking and delivering care. Whether both groups can adapt to an entirely new system is doubtful.[4]

O'Connor does close on a note of openness to experimenting with COPC and implementing it where it does improve health outcomes. He also suggests that HMO style organizations hold the possibility of bringing a coordinated approach to health care delivery, though this was at an early stage in their development (1989).

Several responses to O'Connor can be made from the perspective of ethics. While he notes that COPC has not been documented to work in "nonpoverty" situations, can we not infer a mandate to use it in poverty situations where some limited studies have shown that it would be useful? These trials which demonstrate some success might also be construed to be a mandate to initiate trials among other populations on the belief that benefits seen in one group might carry over to others. At least we should agree that the lack of confirmatory data among some populations does not constitute a firm basis to reject COPC outright.

While O'Connor's description of medical education and the system of delivery of payment for health care seems accurate, even for our own situation nine years later, it does not constitute a strong moral basis for continuing the status quo. Fragmentation of care and perverse incentives which skew the system toward delivery of more high tech interventions are precisely the problems which COPC tries to address. His "is" does not yield a very persuasive "ought."

Interestingly, he does say that the success of gatekeeper and HMO systems (limited in 1989) provides a context in which COPC might develop effectively. Creating populations for which health care is to be delivered, and introducing preventive measures which hold the prospect of lowering the total cost of caring for that population, are interventions which would seem to be appropriate for both COPC and managed care. In both cases the locus of moral responsibility has shifted to a community rather than an individual. In both cases certain procedures or interventions may not be available because of a decision on behalf of the group that they are too expensive for the benefit which accrues to only one person.

Other moral questions are raised by this prospect, however. Of greatest importance, perhaps, is how would criteria be established for entering and exiting the "community?" COPC began as an intervention for those who did not have significant resources or access to other forms of medical care. Communities were established by default in certain geographic areas. Delivery of decentralized care to those who lack transportation was one of the central purposes. If HMO's define communities by place of employment rather than place of residence, or if payment of certain fees gains one entrance to a community, will problems of access to health care and justice in its distribution have been addressed or simply passed over?

If managed care organizations adopt COPC methods, in name or in principle only, and do save money, would they then share the savings with the group members? Would these benefits be paid as dividends to stockholders? How would these savings affect executive compensation? Is this an example of market incentives leading to practices that benefit health care delivery?

Another area of moral concern is how would relationships between physicians and patients be affected by such an arrangement? Would physicians be paid bonuses for a healthy group? Would this affect their clinical judgment? Would physicians working on a salary for an HMO be more willing to be involved in decentralized, preventive interactions with patients or members of the community who are not currently ill but are members of the group being cared for?

There is now some evidence that preventive care does not save money in all cases.[8] Some interventions seem to have a greater effect on the bottom line than others. Efforts and expense which will not pay back dividends until years later, when some of those who received the benefit will not be members of the group, do not make sense economically for managed care organizations. In COPC that may not be a problem, because membership in the group is not calculated so overtly, and providing benefits which one may actualize later may appropriately be within the moral purpose of the effort. Some high profile preventive measures which are low cost may attract attention and garner good will for the organization, having some indirect economic benefit, especially for HMOs which are trying to attract healthy paying members.

The larger question is, would adoption of its core concepts by HMO's for profit making purposes subvert the moral purposes of COPC? At first glance, it would seem that COPC is simply a method of health care delivery which stresses identifying a community in which care will be delivered, emphasizing decentralized primary care over high tech tertiary care, assertive intervention within the community to prevent illness and change lifestyles in healthy ways, and an overall improvement of the health status of the community with less expenditure of resources.

Ironically, such a system can work in two ways. It can be used to introduce more health care into communities which are now underserved or it can be used to lower costs in communities which are now overserved.

COPC can certainly be used as a tool in the elimination of race, class, and gender as inappropriate categories for the intended or unintended disparity of health status or care delivery. Adopting inclusive ways of establishing communities and using these methods can have the effect of introducing more justice into our health care system. COPC does involve practicing medicine in a completely different mode, and there are significant barriers of social customs and habits that will have to be overcome. These are not, however, moral barriers. If justice is served, there may even be a moral mandate to make the necessary changes.❑

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Continuing Medical Education

Second Quarter 1999 Calendar

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Note: CME activities in neighboring states are listed when space permits.
Contact the Medical College of Georgia, Division of Continuing Education at (800) 221-6437 for other activities.

APRIL

Monday – Wednesday April 5-7, 1999
Charleston, SC: Charleston Place Hotel
Azaleas, Dogwoods, and Obstetrical Controversies
SPONSOR: Medical University of South Carolina
DESCRIPTION: This symposium is designed to provide a clinically based update in Obstetrics in the following areas: Prevention of Prematurity, Medical Complications of Pregnancy, and Obstetrical Ultrasound.
TARGET AUDIENCE: Obstetricians and gynecologists
FACULTY: Guest and MUSC faculty
TUITION: $375 before March 1 and $425 after March 1
CONTACT: Pam Benjamin; (843) 876-1925
CREDITS: 14 hours, AMA Category 1

Wednesday – Friday April 7-9, 1999
Hilton Head Island, SC: Hilton Resort
17th Annual Infectious Disease Seminar for the Practicing Physician
SPONSOR: Northeastern Ohio University College of Medicine
DESCRIPTION: Appropriate uses of new oral antibiotics, new oral antiviral agents, new antifungal agents, etc.
TARGET AUDIENCE: Family physicians
CONTACT: Martha Silling; (330) 325-6574
CREDITS: 10.5 AAFP prescribed hours

Friday April 9, 1999
Columbia, SC: Sheraton Hotel
Stroke Update 99
SPONSOR: Medical University of South Carolina
DESCRIPTION: This symposium is designed to provide a clinically based update in evaluation, treatment, and management of stroke.
TARGET AUDIENCE: Primary care physicians
FACULTY: Guest and MUSC faculty
CONTACT: Pam Benjamin; (843) 876-1925
CREDITS: 14 hours, AMA Category 1

Friday – Sunday April 9-11, 1999
Hilton Head Island, SC: Westin Resort
Spring Managed Care Update
SPONSOR: Southern Medical Association
DESCRIPTION: Teaching physicians to be the managers of managed care and determine procedures and resources to best maintain quality patient care and remain efficient.
TARGET AUDIENCE: Family physicians
CONTACT: Nancy Mullins; (205) 945-1840
CREDITS: 12 AAFP prescribed hours

Friday April 16, 1999
Columbia, SC: South Carolina State Museum
Fourth Annual Spring Breast Symposium
SPONSOR: USC School of Medicine – Palmetto Richland Memorial Hospital CME Organization
DESCRIPTION: Update on issues in breast health and the care of patients with breast cancer.

TARGET AUDIENCE: Oncologists, surgeons, radiologists, nurses, others interested in breast health.
FACULTY: Michael J. Edwards, MD; A. Thomas Stauros, MD
TUITION: $100 physicians, $75 non-physicians
CONTACT: Steven Hasterok; (803) 434-4211
CREDITS: 6.5 hours, AMA Category 1

Wednesday – Saturday April 21-24, 1999
Hilton Head Island, SC: Sea Pines Resort
Pediatrics Update
SPONSOR: Lloyd Noland Foundation
DESCRIPTION: Provide update in pediatrics of new information and methods for the primary care physicians who treats children and adolescents.
TARGET AUDIENCE: Primary care physicians
CONTACT: George M. Converse, III, MD; (205) 783-5276
CREDITS: 14.50 AAFP prescribed hours

Thursday – Sunday April 29 – May 2, 1999
Charleston, SC: Charleston Place Hotel
South Carolina Medical Association 151st Annual Meeting and Scientific Assembly
SPONSOR: South Carolina Medical Association
CONTACT: Melissa Hamby: ext. 253, (803) 798-6207 or (800) 327-1021
CREDITS: 12 hours, AMA Category 1

Thursday – Sunday April 29 – May 2, 1999
Charleston, SC: Mills House Hotel
Postgraduate Course in Surgery
SPONSOR: Medical University of South Carolina
DESCRIPTION: This symposium is designed to provide a clinically based update in all areas of surgery.
TARGET AUDIENCE: General surgeons
FACULTY: Guest and MUSC faculty
TUITION: $500 before March 10 and $575 after March 10
CONTACT: Anne Tokarczyk; (843) 797-9393 or 2985
CREDITS: 21 hours, AMA Category 1

Thursday – Sunday April 29 – May 2, 1999
Hilton Head Island, SC: Crown Plaza Resort
Cardiology for the Family Physician
SPONSOR: Continuing Medical Education Associates
DESCRIPTION: Expose participants to recent clinical advances in the diagnosis, management, and treatment of common cardiology problems.
TARGET AUDIENCE: Family physicians
CONTACT: Jacqueline Shiller; (800) 993-2632
CREDITS: 20 AAFP prescribed hours

MAY

Sunday - Wednesday May 2-5, 1999
Hilton Head Island, SC: Crown Plaza Resort
Essentials in Emergency Medicine and Urgent Care for the Family Physician
SPONSOR: Continuing Medical Education Associates
DESCRIPTION: Program focuses on current diagnosis and management of common emergencies seen in the office setting.
TARGET AUDIENCE: Family physicians
CONTACT: Jacqueline Shiller; (800) 993-2632
CREDITS: 20 AAFP prescribed hours

Friday – Sunday May 14-16, 1999
Hilton Head Island, SC: Hilton Resort
Managing Respiratory Diseases
SPONSOR: Medical Education Resources
CONTACT: Linda Main; (303) 798-9682 or (800) 421-3756
CREDITS: 11 hours, AMA Category 1

Friday – Sunday May 21-23, 1999
Charleston, SC: Wild Dunes Resort
Advanced Endoscopy Update
SPONSOR: Medical University of South Carolina
DESCRIPTION: This symposium is designed for gastroenterologists/surgeons already performing endoscopy techniques, as well as GI nursing and technical staff.
TARGET AUDIENCE: Gastroenterologists
FACULTY: Guest and MUSC faculty
TUITION: $375 before April 1; $425 after April 1
CONTACT: Rita Oden; (843) 792-6865
CREDITS: 10 hours, AMA Category 1

Thursday – Saturday May 27-29, 1999
Charleston, SC: Sheraton Hotel
New Drug Update
SPONSOR: Medical University of South Carolina
DESCRIPTION: This symposium is designed to update the primary care physician, pharmacist,

and nurse practitioner on new drugs.
TARGET AUDIENCE: Primary care physicians
FACULTY: Guest and MUSC faculty
CONTACT: Odessa Ussery; (843) 876-1925

Friday – Monday May 28-31, 1999
Charleston, SC: Westin Francis Marion Hotel
Medicine in the Vocal Arts
SPONSOR: Medical University of South Carolina
DESCRIPTION: This course is designed for the otolaryngologists and speech pathologists who wish to further their understanding of vocal mechanisms and voice disorders.
TARGET AUDIENCE: Otolaryngologists and speech pathologists
FACULTY: Guest and MUSC faculty
TUITION: $450
CONTACT: Lucinda Halstead, MD; (843) 792-7162
CREDITS: 21 hours, AMA Category 1

JUNE

Wednesday - Saturday June 2-5, 1999
Charleston, SC: Charleston Place Hotel
23rd Annual Cardiology Update for the Primary Care Physician
SPONSOR: American College of Cardiology
DESCRIPTION: This symposium is designed to provide information on recent advances in the treatment of cardiovascular disease for primary care physicians.
TARGET AUDIENCE: Primary care physicians
FACULTY: Guest and MUSC faculty
TUITION: $545 before May 19; $595 after May 19
CONTACT: Odessa Ussery; (843) 876-1928
CREDITS: 18.5 hours, AMA Category 1

Thursday - Sunday June 3-6, 1999
Charleston, SC: Westin Francis Marion Hotel
Ophthalmology Update 1999
SPONSOR: Medical University of South Carolina
DESCRIPTION: This is designed as an update for the practicing ophthalmologist.
TARGET AUDIENCE: Ophthalmologists
FACULTY: Guest and MUSC faculty
CONTACT: Maddie Manuel; (843) 792-2760

Thursday - Sunday June 3-6, 1999
Charleston, SC: Mills House Hotel
Orthopedics at Spoleto
SPONSOR: Medical University of South Carolina
DESCRIPTION: This is designed as an update for the practicing orthopedic surgeon.
TARGET AUDIENCE: Orthopedic surgeons
FACULTY: Guest and MUSC faculty
CONTACT: Pam Benjamin; (843) 876-1925

Monday - Saturday June 7-12, 1999
Kiawah Island, SC: Kiawah Island Resort
Intensive Review in Family Medicine
SPONSOR: Medical University of South Carolina
DESCRIPTION: This intensive review is designed for the practicing family physician.
TARGET AUDIENCE: Family physicians
FACULTY: Guest and MUSC faculty
CONTACT: Odessa Ussery; (843) 876-1925

Thursday – Saturday June 10-12, 1999
Charleston, SC: Institute of Psychiatry Auditorium, Medical University of South Carolina
Update in Psychiatry
SPONSOR: Medical University of South Carolina
DESCRIPTION: This conference is designed for the practicing psychiatrist.
TARGET AUDIENCE: Psychiatrists
FACULTY: Guest and MUSC faculty
CONTACT: Carol Hanback; (843) 792-0023

Monday – Saturday June 14-19, 1999
Hilton Head Island, SC: The Westin Resort
Eighth Annual Advanced Cardiovascular Interventions Symposium
SPONSOR: Carolinas HealthCare System
DESCRIPTION: A six-day course for interventional and invasive cardiologists, Directors of Cardiology Services, Cardiac Cath Lab Managers, and others interested in major interventional trails examining roles of: "optimal balloon angioplasty, stents, intravascular ultrasound, functional angiometry, atherectomy devices, debulking strategies, in-stent restenosis, and more.
FACULTY: Charles Simonton, MD, Course Director; Raoul Bonan, MD; Michael Cowley, MD; Nicolas Chrones, MD; Charles Davidson, MD; Edward Diethrich, MD; and many more.
TUITION: $850

CONTACT: Mary Anne Cox; (704) 355-3942 or (800) 562-7314, ext. 3942
CREDITS: 21 hours, AMA Category 1

Wednesday – Saturday June 16-19, 1999
Hilton Head Island, SC: Sea Pines Resort Conference Center
Adult Infectious Disease Seminar
SPONSOR: Lloyd Noland Foundation
DESCRIPTION: Provide and update advances in new information and methods for primary care physicians who treat adults with infectious disease problems.
TARGET AUDIENCE: Primary care physicians
CONTACT: George M. Converse, III, MD; (205) 783-5276
CREDITS: 16.5 AAFP prescribed hours

Friday – Saturday June 18-19, 1999
Greenwood, SC: Preston Nesbitt Auditorium/ AHEC
Annual Festival of Flowers
SPONSOR: Self Memorial Hospital
DESCRIPTION: One and ½ day meeting of various medical topics of interest to practicing primary care physicians.
TARGET AUDIENCE: Primary care physicians, nurse practitioners, physicians assistants, pharmacists
FACULTY: Local, state, and national experts
TUITION: $75.00
CONTACT: Stoney Abercrombie, MD; (864) 227-4869
CREDITS: 10 hours, AMA Category 1

Friday – Sunday June 18-20, 1999
St. Simons Island, GA: King and Prince Beach Resort
3rd Annual Transplant Symposium
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Internal medicine, family practice, general surgery
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 9 hours, AMA Category 1

Tuesday – Sunday June 22-26, 1999
Hilton Head Island, SC: Sea Pines Resort Conference Center
Pediatric Infectious Disease Seminar
SPONSOR: Lloyd Noland Foundation
DESCRIPTION: Provide and update the advances in new information and methods for primary care physicians who treat children and adolescents.
TARGET AUDIENCE: Primary care physicians
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THE PRACTICE OF COMMUNITY ORIENTED PRIMARY CARE: AN ETHICAL APPRAISAL

ALBERT H. KELLER, D. MIN.*

Community Oriented Primary Care (COPC), a socially-responsive model of health care that combines primary care skills and the principles of epidemiology, is a modest but significant advance towards the ethical goal of incorporating both patient autonomy and social justice into our health care system.[1] This article builds a theoretical base for COPC, spells out the simplicity of the model, and gives examples of its application, concluding that COPC should be a component of health care reform in South Carolina and nationally.

Health educators have begun to propose that increasing the competence of individuals and communities to create the conditions necessary for solving health and social problems is as important as improving specific health outcomes.[2] This postulate should pose no problems for physicians who subscribe to the "teach a man to fish" philosophy of helping others help themselves. Seen as a comment on medical services and the role of the physician, however, the idea raises interesting questions about how the practitioner might hold a community, and not only the individual patient, as the object of responsibility. Reaching for a broader health care goal than individual satisfaction with specific health outcomes, it leads (by implication) beyond the conventional dyadic framework—the doctor-patient encounter—to focus on the complex system of the community as a frame for the physician's practice. That is, the hypothesis places health care in the framework of the concept of the "civil society", evoking a vision of voluntary, localized structures that empower people in a community to solve their own problems at a local level with their primary care physician's help.[3]

Brazilian educator Paulo Freire amplifies the principle of empowerment both theoretically and empirically in his work with literacy education among the poor. When people are treated not as objects or recipients of educational or other political projects, but as actors who are able to name their problems and work out their solutions, they themselves are transformed through the process of changing oppressive external circumstances.[4] Transposing this principle into the medical domain, when people (including health professionals) find ways to listen to each other, name their common health issues, and find strategies for change, the process itself is healthy both for the individuals and for the communities in which they live.

Most agree that the health conditions that cause major morbidity and mortality today—heart disease, cancer, violence, accidents, infectious diseases—have multiple causes and require multidimensional interventions.[5,6] Heart disease, for example, is affected by individual behaviors such as smoking, exercise, and diet; stressors in the workplace and neighborhood; levels of air pollution; recreation facilities in the community; public policies on tobacco and food; and access to medical care.[2] Oversight of the health of individuals, and the development of interventions to prevent these conditions, require that these causal factors be integrated where people live. The level at which the broadest integration normally takes place with reference to individuals is the oversight provided by the primary care physician.

An approach to health care that takes into account the interactions among individual, social, community, and environmental factors may be called an ecological approach.[6] 'Ecology' refers to a theoretical base that sees the forces influencing health as complex, dynamic and interactive, and strives for sustainable levels of health in balanced, interdependent communities.

Nowhere is such a systematic approach more appropriate, if not necessary, than in primary care. The ecological model of health care is not driven by the economic forces that usually drive managed care, and that often define the role of the primary care physician as the base and entry to an integrated system. Yet features of managed care organizations, such as the definition of populations and emphasis on preventive care and health education, bend our thinking toward models of practice that have a great deal of moral cogency when invested with ecological theory. Such an ecological model that may serve as a crosswalk between the structures of managed care and traditional doctors' practices is Community Oriented Primary Care.

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What is Community Oriented Primary Care? The model was first developed by Kark and Kark out of primary care experience in South Africa and Israel, where they faced the demand to strike a balance between medicine and public health, technology and prevention.[7] Three components, in their view and that of subsequent advocates, are required for COPC: (1) a community-based, primary care practice; (2) an identifiable community or defined population for which the practitioner assumes responsibility for improving the health status; and (3) a goal-setting, planning, monitoring, and evaluating process to assess impacts.[8] Key elements in this approach include the use of epidemiological methods to assess community health problems; collaboration with community residents and leaders to identify needs, establish priorities, and plan intervention strategies; and the effective use of evaluative mechanisms and outcomes research to "progressively and systematically modify the health care services and to redirect health care resources."[8]

As with other relationships, the practitioner-community relationship develops one step at a time and in ways that reflect the particular features of the situation. When practitioners (or a practice) choose to begin working with the COPC model, they may start with a single category of patients. Garr and colleagues describe an incremental process that may begin, for example, when a practice identifies its diabetic patients as a population for which it wishes to provide more systematic care.[9] The process would include a study of their demographic characteristics, assembling a group of diabetic patients to assist in creating new programs or services for diabetic patients, and monitoring the outcome of these services in order to make further modifications. The authors point out that to begin with this kind of problem-defined population within a given practice is probably most appropriate when there are multiple practices in a geographic area.

A next step described by Garr would be to retain the problem-defined population but focus on both the users and non-users of one's specific practice who live in the geographic area. The assessment and planning group assembled to develop a program would include other health care providers, patients from other groups, and other appropriate representatives of the (geographic) community. The aim would be a cooperative effort to increase the range and effectiveness of services to diabetics in the catchment area.

The Charleston Enterprise/MUSC Neighborhood Health Program initiative provides an example of a different way the COPC approach can develop. In this case, the population or "denominator" group is defined politically or geographically rather than by a health problem. A federal grant secured by the City of Charleston in 1995 designated 11 contiguous census tracts as the Enterprise Community. Within this area approximately 23,000 people living in 18 distinct neighborhoods were identified as the population for a comprehensive health program.[10] The health program is one arm of a more extensive neighborhood revitalization program covered by the grant and may be viewed separately.

According to 1990 census data, the poverty rate for families in these tracts is more than 45 percent, compared to 16 percent of families citywide and ten percent of families nationally. The 7.3 square mile area is also home to 67 commercial sites with known or potential environmental contamination, including one Superfund site, 16 sites containing extremely hazardous materials, and 23 leaking underground storage tanks. Although MUSC is at the edge of the Enterprise Community, most of the area has no access to physician services at all.

Through the vehicle of active neighborhood associations, residents of the Enterprise Community initially identified five interlinked issues of major concern to them: creation and retention of jobs; revitalization of neighborhoods; improved human and family services; economic opportunity; and sustainable community development. MUSC's Environmental Hazards Assessment Program (EHAP), the "health" partner in the overall project, proposed four related priorities: development of a Primary Health Care Resource Center; comprehensive land-use planning; planning and coordination for environmental cleanup operations; and health risk research, service, and education.

Out of these preliminary conceptualizations of priorities emerged the Enterprise/MUSC Neighborhood Health Program (NHP), directed by Carolyn Jenkins, DrPH, RNC, RD, a faculty member in the College of Nursing. The staff team includes two residents of the Enterprise Community. The purpose of the NHP was stated as follows: "To work collaboratively with the 18 inner-city neighborhoods to identify health-related priorities for each of the neighborhoods and for the community as a whole; develop and implement an action plan for addressing the top priorities; and evaluate outcomes and celebrate successes."[10] Work began in August, 1995.

To summarize the process to date, neighborhood assessments have been conducted in all the neighborhoods in close cooperation with existing neighborhood associations, churches, and other civic associations. Six health priorities were identified through this process: hypertension management and education; diabetes management and education; primary prevention (nutrition, weight control, physical activity, safety in the home); primary care and health education; environmental health issues; and drug/alcohol abuse programs. People were identified in each neighborhood as natural leaders and "kin-keepers", and 55 of these residents volunteered to serve as Neighborhood Health Advisors, representing 13 of the 18 neighborhoods. Three training events have been held for the Advisors, with additional training in advocacy/navigation of the health care system and related community agencies and in crime prevention at the neighborhood level. A planning team made up of NHP staff, Neighborhood Health Advisors, and Neighborhood Presidents prepared the Neighborhood Health Advisor Training Manual, containing both generic and neighborhood-specific training materials which is regularly updated.

In line with the neighborhood health priorities statement, three Neighborhood Health Festivals have been held in different locations with over 600 residents participating, during which 800 health screenings were provided with 100 persons referred for further care or enrolled in ongoing health programs. Nursing Clinics have been established in five neighborhoods. Additionally, a building is currently being renovated to serve as the Union Heights Clinic and Opportunity Center. The staff will include a family physician providing primary care, integrated with health education and advocacy structures which are already in place.

This extended summary of the Enterprise/MUSC Neighborhood Health Program illustrates an application of the COPC concept that began with a categorical grant rather than with an established practice, and with a pre-defined, political/geographic population rather than one defined by a single health problem. The problem of choosing and identifying a "community" as the denominator group for epidemiological purposes is situational and can be resolved practically. The important thing is that the health concerns of a specified group (larger than an individual or patient) are being addressed.[11]

The physician who will start a practice in the Union Heights Clinic, as mentioned above, will begin in the context of a community that has already been studied demographically and epidemiologically and that has already identified health needs and priorities and responded to those priorities with dynamic programs. The physician will find a large number of individuals already accepting responsibility for their health and that of their neighbors, and corporate structures seeking ways to raise the health status of the whole community. An integral part of the physician's work, in addition to clinical care, will be to provide collaborative leadership within a community actively pursuing better health.

A physician imbued with the assumptions and ideals of the COPC model is likely to consider such a mobilized community as a place where he/she could function most effectively as a physician. But that doctor will face problems too. Notable among them are problems faced by the COPC model itself. I will suggest three.

First, with a diffuse community facing a wide variety of health problems, each with multiple causality, it is intuitive that an ecological approach to health oversight is the best approach; but due to the very complexity of the factors involved, it is difficult if not impossible to do outcomes research and measure specific parameters or programs. This is generally true of ecological approaches, and points also to the problem of evaluating and modifying programs that is essential to the COPC process.[2] On the other hand, if the interest is not publishable research but practical improvement of health interventions, the inventive practitioner will likely be able to design outcome measurements that are sufficient.

Second, while the problem of choosing and identifying a community or denominator group is resolvable in practice, the real difficulty lies in the question of who speaks for the community, how (by what legitimate means) they shall speak, and the degree of power they shall have vis-a-vis the professionals or bureaucracies now commonly known as "providers." Community participation means many different things from simply having access to a service, to having an advisory voice or being a sounding-board to professionals, to having a major influence in decision-making processes that control local health care institutions. Lukomnick acknowledges the inherent difficulty of significant community participation in any health program, then analyzes a variety of existing models that lead her to conclude that community participation is nevertheless possible, and has been achieved, in a variety of settings.[12]

Recognizing the often extreme problems of sharing power when such disparate interests are involved, she affirms that "communities will be healthier not only as a result of the measurable (health) outcomes but as a result of the process," and that community involvement is a central premise of COPC.

Third, the common interest of COPC and managed care organizations (i.e. those in a defined population) in preventive care may beguile the practitioner into thinking that the health industry pursues the same basic concerns as COPC and they should, therefore, be considered together. While the structure of managed care organizations and public programs does present denominator groups with the potential of empowerment and improved health status, that potential is threatened by policies that deny access to the uninsured or that guarantee hospitals a favorable patient mix. Disengaging the basic precepts of COPC from the basic financial interests of managed care may be difficult when one is practicing within the structure of the latter. Yet, as Robinson observes, "A community that is organized around a primary care practice is much better prepared to respond to the continual and varied assaults on access to care." [13]

In conclusion, the precepts of Community Oriented Primary Care possess the ethical force, in my view, to influence the evolution of health care in desirable directions. They broaden our understanding of patient autonomy beyond informed consent to community empowerment, and they foster social justice by strengthening the patient-based infrastructure of the health care system. Doctors may well respond positively to the increased personal responsibility patients take for their health, the careful outcome research required by the model, and the ensuing elevation in health status in their practice, but the ethical arguments for COPC remain central to its consideration. Maybe it's just the right thing to do.❑

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TRANSPLANTATION, THE ORGAN GAP, AND RACE

ROBERT M. SADE, M. D.*

Clinical transplantation of solid organs over recent decades has seen a steady stream of advances in techniques and drug management. The resulting improved survival of both patients and transplanted organs has led to ever-broadening indications for transplantation. The result has been longer lives of higher quality for more people than could have been imagined just a few years ago. Last year, over 20,000 transplants of solid organs were done in this country.

There is a dark side to this success story, however. The waiting list has grown while the number of available organs has remained stable. Last year, there were 45,000 people on the waiting list for transplantation, and 3,500 died before an organ could be found for them. The problem is not that there are not enough medically suitable organs; rather, it is that most of the suitable organs are being buried. Kidneys and lobes of livers and lungs come from living donors, but most solid organs come from people who have recently died, so-called cadaveric donors. Despite public relations initiatives, widespread public and professional education, and a variety of laws aimed at increasing donation rates, cadaveric organ donation has increased only five percent per year in the past decade, while the waiting list of those in need of transplants has grown by 31 percent a year.[1] Of all medically suitable donors, only 35 percent actually agreed to donate.[2] The gap between supply and need of organ transplantation would largely evaporate if all suitable organs were donated.

Transplantation and Race

The issue of race poses special problems in transplantation. Because of the prevalence of hypertensive renal disease in the black population, that group has a disproportionately high representation on the kidney transplant waiting list. While blacks compose 12 percent of the general population, they compose 37 percent of the kidney transplantation waiting list, and receive 25 percent of the kidney transplants.[1] Their need for other organs is more closely in line with the general population.

A variety of factors contribute to differences among races: biological, medical, social, and personal. Biological factors include different rates of ABO blood groups within races, as well as differences in major histocompatibility complex antigens.[3] Because of these differences, organs from black donors have a better match with potential black recipients than white. Blacks have a lower donation rate than whites, for reasons discussed in more detail below, contributing to fewer available biologically compatible organs for blacks than for whites.

Suitability for transplantation is related to comorbid medical conditions, such as diabetes and hypertension, and social factors, such as alcoholism and drug abuse, all of which may be higher in minority communities. Moreover, there is considerable geographic variation in donation rates, and some regions with a relatively high proportion of black population are also regions with low donation rates. This will affect the national statistics on transplantation in blacks.

Personal preferences affect transplantation rates. For example, a recent survey found that while 90 percent of whites would accept an organ transplant if their lives would be saved by it, only 70 percent of blacks would. Exposure to information about transplantation was also lower among blacks: while 70 percent of whites had read, seen, or heard about transplants within the previous year, only 40 percent of blacks did.[4]

There is little evidence of widespread racial discrimination in transplant programs. At least one group of investigators, however, has found that not all the differences in white and black transplant rates are due to biological, medical, or personal reasons. They suggest that there may be some degree of racial bias in distribution of organs.[5]

The donation rate in the black community has historically been low compared with that of whites. There appear to be several reasons for this difference. The most important are widespread distrust of the medical system, a belief that willingness to donate may result in premature termination of life support, and the belief that organs donated by blacks will disproportionately go to white recipients.[6] Assurance that black organs would go to black recipients could result in a greater willingness to donate on the part of some blacks.

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Increasing Cadaveric Donation Rate

I will focus next on how the rate of cadaveric organ donation can be raised, then look at the racial implications of donation increases. Organs can be procured from both living and dead donors, but the most disturbing losses occur when suitable organs from the recently dead are not transplanted, but are buried.

An important cause of the organ gap may be notions regarding the moral foundations of transplantation. Stated simply, it is the position of the United Network for Organ Sharing (UNOS, the national organization for coordinating procurement and distribution of organs) that the only ethically sound motivation for donation is altruism, construed as absence of personal benefit, and solidarity with the national community. Any kind of personal benefit from donation is deemed unacceptable or at least suspect on moral grounds. I suggest that this view of the morality of transplantation is overly narrow and thereby eliminates a broad range of motivations and opportunities for people to donate organs. Such motivations might include personal and financial rewards.

Personal Benefit

Organs suitable for transplantation have great value. Philanthropic organizations that are successful in eliciting donations of large blocks of volunteer time and large sums of money know a good deal about what motivates people to make such donations. Certainly, serving the general good is one such motivation, but it is not a major one.[7] Most major donations go to churches, synagogues, and other organizations which have great personal meaning to the donor.[8] Many large donations are made through wills and trusts, both before and after death. In fact, some people spend large sums on estate planning designed to prevent their assets from going into general funds for the public good, preferring that their assets go to persons or causes they personally choose.

The idea that valuable resources are usually donated to organizations or efforts dedicated to causes for which the donor has sympathy seems so fundamental that it should be possible to use it to increase organ donation. For many years, UNOS has allowed only rare exceptions to their practice of giving no information regarding the recipient of a transplanted organ to the potential donor. Yet, such information could be used as motivation to donate.

One recommended policy change would allow potential donors or their families to honor and commemorate the life of the donor by permitting their participation in selecting a recipient of the donated organs.[9] Under such a program, UNOS would continue to maintain a list of medically indicated recipients. Each person, through an advance directive, or a family at the time of death, could specify the characteristics of the recipient in terms of local or national community, younger or older age, membership in certain organizations or churches, and the like.

Contemporary information technology could make instantaneously available a wide range of information about each potential recipient. The process could be as simple or as complex as the person or family wishes. It could be a simple as allowing UNOS to make all decisions regarding the recipient, as they do now, or as complex as specifying geographic location, age, religion, race, severity of illness, as well as other specifics. A program like this is consistent with current law, and is consistent with ethical principles as well.[9] What prevents its implementation is the narrow view that the only acceptable motivation for donation is community solidarity without personal benefit.

Such a program is likely to disproportionately benefit the rate of transplantation in the black community. As mentioned earlier, blacks donate organs at a lower rate than whites. There are many reasons for this, but prominent among them are distrust of the health care system and of medical authority, and the belief that donated organs from blacks will go to other races.[6] A system in which black persons could specify that their organs could go only to other blacks would give them a special reason to donate. An additional benefit of an increase in black donation rate is that blood groups and histocompatibility antigens have different distributions in different races. Therefore, as the black donation rate goes up, the number of transplants into blacks will increase, and longevity of the implanted organs will improve as well.

Financial Rewards

Another kind of personal benefit that could provide incentive to donate cadaveric organs is financial rewards. Such payment, however, has been illegal since 1984.[10] Appealing to altruism for donation will be very attractive to many people, but many others are too burdened with the grief, pain and often anger produced by the loss of a loved one to feel generous toward unknown others. Offering payment for donated organs will not relieve grief or pain, but, in the face of burial, funeral, and other expenses, may make a decision to donate easier. The prospect of easing financial burdens on family may persuade some people who have not signed an organ donor card to execute an advance directive for donation. Payment is likely to increase the supply, diminish the organ gap, and potentially save thousands of lives each year.

Many kinds of financial rewards have been suggested, ranging from paying for funeral expenses for the deceased to allowing an open market with floating prices for organs determined by demand.[11] All, from the simplest and least expensive to the most (seemingly) radical have been rejected in principle by UNOS on the ethical grounds that donation should be motivated by altruism and no other reason can count as acceptable. Yet, good grounds for permitting payment have been given. The most common is the persuasive utilitarian argument that without payment, organs are wasted through burial, and with payment, many more organs could be procured and lives saved.

At least two arguments for organ donation payment are even more powerful. First, allowing payment for organs recognizes and confirms the right of people to exercise sovereignty over their own bodies. The most fundamental tenet of a free society is that people should be treated as ends in themselves, and should not be used merely as a means to another's ends. Prohibiting payment for organs effectively denies people the right to use their own bodies for their own chosen purposes.

Second, permitting payment increases over-all well-being. A person who chooses to give organs after death in exchange for payment knows that after his death, his family will be better off than they would be if he did not donate his organs, and the recipients whose lives are saved will be better off as well. All persons directly involved in the transaction benefit and are better off: the donor and those close to him, and the recipient and those close to her. Who, then, loses if payment for organs is permitted? What are the objections to payment?

Most arguments against payment for organs (difficulties with informed consent, protection of sellers against the risks of explant operations, exploitation of the poor, alienation of the body from the whole person)[12] apply to living sellers. But these objections do not concern us here, because we are suggesting payment only for cadaver organs, not organs of living persons. Two objections to payment for organs, however, apply also to cadavers: 1) putting a price on organs will raise the cost of transplantation, which may lead to unequal distribution, the rich being able to pay for organs more easily than the poor; and 2) the sale of human body parts may diminish altruistic donation.

First, there may be unequal distribution of organs, but this is due to unequal access to health insurance, not to the cost of transplantation.[13] Most transplants are paid for by private or public insurance, not by individuals, so the problem is one of availability of insurance. Prohibiting payment for organs will not correct this difficulty. Moreover, artificial organs are currently sold through markets: if it were true that markets gave greater access to the rich, why is it acceptable for the rich to have increased access to an artificial kidney, but not to a human kidney? Finally, the cost of transplantation is already so high that adding payment for the organ to the cost of procurement will represent only a marginal increase in cost. We already pay procurement agencies for harvesting organs, transplant doctors for providing services, and transplant centers for supplying equipment, supplies, and personnel. It seems eminently sensible to pay also the key figure in the process: the supplier of organs.

The second objection to allowing payment for cadaver organs is that those who are inclined to donate on altruistic grounds may be less inclined to do so if payment for organs is available.[13] Data on the effect of payment for blood donation on donation rates are ambiguous. It is clear, though, that availability of payment does not usually drive out altruistic donation. For example, there is a market where used clothes and toys can be bought and sold, but people are more likely to give them away than to sell them; doctors and lawyers sell their services, but many donate some of their time pro bono; most hospital workers are paid, but there are still many volunteers. The claim that payment for organs will reduce altruistic donation will be convincing only when there are actual data to support it.

Conclusion

There appear to be no persuasive moral reasons to prohibit payment for cadaver organs. Nevertheless, sale of organs has been legally prohibited, on moral grounds, with baleful consequences. The ban has made discussion of payment moot, thus focusing public discussion on how best to ration organs that are in short supply. Moreover, the indirect methods to increase supply that are available have proven only marginally effective for two decades. Many ethical problems are created by the rationing of scarce organs: for example, how to weigh severity of illness, geographic location and racial inequities in allocating organs. These issues would evaporate if the supply of organs were adequate.

The effect of prohibiting payment has been disproportionately adverse on poor minorities. Organs, both from living donors and cadavers, have great value, and financial benefit to donors would disproportionately benefit poor people. Prohibiting payment for organs removes an important incentive for poor people to donate, and the large number of blacks in that group translates into reduction of availability of biologically suitable organs for blacks in particular. While prohibition of payment harms everyone, its effect specifically on blacks means that reversing it would disproportionately benefit them.

There are good moral and ethical grounds to reject absolute prohibition of payment for cadaver organs. By changing the focus from rationing of scarce organs to increasing the numbers of organs by permitting payment for them, we will at least be free to discuss and debate, as we are not now, what kind of payment system would work best to assure an adequate supply of organs.

The incentives based on personal benefit that I have discussed, at their root, are expressions of the ideas of personal autonomy and self-ownership that have been the foundation of American society and law. The trend in recent years has been away from that foundation; the policies I have advocated move us toward increasing rather than diminishing personal freedom and responsibility. The effect of the judicious use of such incentives would be to hasten the day when the organ gap disappears, to the benefit of thousands, of all races, who would otherwise die.❑

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Editorials

RACE AND HEALTH CARE

Here's the case, a familiar scenario. A 57-year-old African American man comes to the emergency room with shortness of breath and is found to have urgent hypertension, left ventricular failure, and pulmonary edema.

Here's the dialogue. "Have you ever been told you had high blood pressure?" "Yes." "Have you been treated?" "Yes." "Are you taking your medicines now?" "No. I stopped six months ago because I couldn't afford them."

Now, here's the question. Is his failure to take his medication (a) a socioeconomic problem?; (b) a healthcare delivery systems problem?; (c) his own problem, or a physician-patient relationship problem?; (d) a reflection of racism in our society?; or (e) all of the above?

My answer, at least for today: (e) All of the above.

The question is distressingly common and complex. Let's review the possible answers.

We can blame socioeconomics (or sociodemographics). Extensive studies in many cultures document the effect of socioeconomic status on health. As one writer put it, "Top people live longer."[1] This effect may even be a biologic phenomenon. Some evidence suggests that social hierarchy correlates with health in non-human primates. Researchers at the University of South Carolina recently found that a socioeconomic gradient extends to pets. Even the pets of the better-educated and better-off live longer![2] Our patient could not afford his pills because he did not have a good job.

We can blame our healthcare delivery system. Our healthcare system allows many people to fall through the cracks of adequate insurance coverage. Why not make blood pressure monitoring and antihypertensive drugs available and convenient to everyone who needs them? Would this not cost society far less than the cost of managing hypertensive emergencies and end-organ failure? Our patient could not obtain good care because the system made it too difficult.

We can blame the individual patient and/or his doctor. Physicians and patients of different backgrounds often communicate poorly. Was adequate rapport established? Were the implications of hypertension sufficiently stressed? Were ethnic differences appreciated? According to one study, African Americans are more likely to perceive physicians' behavior as undesirable and are more likely to turn to God for control of personal destiny.[3] They may be more inclined to suffer stoically rather than seek handouts. Our patient and his doctor were on different wavelengths.

We can blame racism. Racism might have caused or contributed to his hypertension in the first place. Data suggest that among Blacks, blood pressure is related to the extent of racial discrimination, unfair treatment, social support, and stress.[4-5] One provocative study suggests that racial disrespect correlates with mortality not only in Blacks but also in whites.[6] Data also suggest that African Americans receive fewer invasive cardiac procedures than do whites, although the differences tend to be eliminated when insurance coverage is equalized.[7] Subtle racial tensions caused our patient's hypertension and muddled its treatment.

I do not know the best answer. Clearly the problem is multifactorial but with the various forces pushing and pulling at different rates in different patients and different doctors.

The symposium in this issue of *The Journal* came from a retreat held in February 1997 by the SCMA's Ethics Committee. Kristy Maher McNamara begins by pointing out that "there is a clear and persistent racial gap in health in the United States." As is well known, the health of African Americans declines at a faster rate at all ages compared to their white counterparts.[8]

Dr. McNamara's observations on the what do not resolve the why. Drs. Stuart Sprague and Albert Keller describe Community Oriented Primary Care, an approach to making care more equitable. Today's management gurus inform us that most problems are actually systems problems, and Community Oriented Primary Care takes a systems approach to these issues. Finally, Dr. Robert Sade points out the dilemmas faced by African Americans in getting access to transplantation medicine.

These laudable papers leave us wondering about the extent to which inequalities in American healthcare can be eliminated.

In principle we turn to the ideal of equality expressed by the authors of the Declaration of Independence, influenced as they were by the philosophy of John Locke (who happened to be a physician). In practice we acknowledge that equality in healthcare or in anything else for that matter proves to be an elusive grail. We nostalgically turn to the ancient Greeks for the ideal of a noble profession embracing "love of humanity and love of the art," but access to healthcare in Greece was decidedly class-determined. We turn to later generations, such as the Romans influenced by Scribonius Largus and the Scots influenced by John Gregory, for the ideal of charity in medicine, but this, too, is often tenuous. Charity—call it paternalism or *noblesse oblige*, if you like—is a flickering light that dims when times get tight. In sum, it's doubtful that true equality in goods and services can ever be achieved, at least in a free society. But how might we more nearly achieve it? And how might we eliminate forever the barrier of race?

As Americans we pride ourselves as belonging to the land of opportunity formed by immigrants. It was Clare Booth Luce who pointed out that this ideal translates historically to "a nation of white immigrants." It was Robert F. Kennedy who pointed out that racial discrimination is not a uniquely Southern problem but rather a national problem. Still the history of the Palmetto State dramatizes how persons of different ethnic backgrounds do not always mix well (to put it mildly).

It was here, somewhere near Winyah Bay, that in 1526 the Spaniard Lucas Váquez de Ayllón brought African American slaves in his attempt to establish the first European settlement in what is now the United States. It was here in the 18th century that English colonists from the Barbados—the original "Goose Creek men"—indulged in the Indian slave trade, scouring the coasts for unsuspecting Native Americans. It was here on Sullivan's Island, the Black equivalent of Ellis Island, that one-half of the ancestors of all African Americans were quarantined before meeting their destinies at the markets. It was here along the coast, most notoriously in Georgetown County, that African slaves reached their densest populations when rice replaced indigo after the Revolution. It was here that thousands of freedmen were left to fend largely for themselves and often knew discrimination of the worst kind.

We have come a long, long, long way. But there is more to be done.

On matters pertaining to race relations, organized medicine has not always led the way.[9] Certainly we should. Collectively we should explore such approaches as the use of "report card" approaches to monitoring care systems.[10] Individually we should acknowledge that pride of race and racial prejudice are ubiquitous, perhaps present in everyone if we're honest about it. We should resolve to celebrate our common humanity. We should resolve to treat everyone alike.

The SCMA's Ethics Committee is to be congratulated for taking on this thorny topic. This is, I think, another example that organized medicine is working hard toward the dream that Americans can indeed resolve their differences and for the common good.

—CSB

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Letters to the Editor

Dear Sir:

I am writing to call attention to a new book, *Expert Witness*, by Dr. Charles A. Bertrand (Creative Media Productions, 1998), which I feel is a "must read" for practicing physicians today. As a long time member of the South Carolina Medical Association, I appreciate how *The Journal* contributes to keeping us informed on current medical issues.

Not only is *Expert Witness* informative and interesting, it is thought provoking. Dr. Bertrand's insights into the present state of the "malpractice problem" are punctuated with antecdotes from personal experience as an expert witness in many trials. He is alarmed by the rapid increase in malpractice suits—"trial lawyers are pursuing as many as 120,000 lawsuits against America's 500,000 physicinas at any one time" and by the size of damages being awarded.

Dr. Bertrand offers valid ideas for reform. He suggests that judges—not opposing lawyers—choose jurors, and that juries be allowed to determine guilt or innocence only. Damages, he states, should then be set by the judge.

The motivation for writing *Expert Witness* came from this distinguished cardiolgist's deep concern for the general health care situation. Dr. Bertrand feels that the packaging, marketing, and cost cutting techniques in today's managed care are threatening the quality of health care and endangering the traditional relationship between physician and patient.

Expert Witness will make you think about important issues physicians face today. Dr. Bertand's wisdom, insight, and ideas shine as a beacon of hope for some of health care's greatest problems.

Joseph W. Black, MD
Dept. of Pathology
Hilton Head Medical Center & Clinics
P.O. Box 21117
Hilton Head Island, SC 29925

Dear Sir:

Our adult population aged 65 years old and older is growing so rapidly that it is predicted that by the year 2025, this group will be 20 percent of our total population.

A consequence of getting older is the gradual decline in muscular strength and ultimately, muscular function. As a result, older individuals are at greater risk for falls, injuries, and limitations imposed by this physical frailty. Gradually the frail elderly are unable to live independently because they are unable to perform such necessary activities of daily living as going to the toilet, walking, dressing themselves, cooking, and other things younger citizens take for granted. When there is sufficient deterioration in the quality of life, our elderly often must be institutionalized.

In an attempt to delay the onset of physical frailty, several groups have worked together to develop an exercise program that our elderly can use in their homes to maintain or even to improve functional fitness. This goal of helping our senior citizens continue living independently brought together the School of Public Health at the University of South Carolina and Department of Health and Human Services' Division of Community Long-Term Care (CLTC) to create "The Placemat Strength Training Program."

The centerpiece of the program is a laminated placemat consisting of examples of ten different exercises that are completed by sitting in or standing behind a chair with arms. The placemat, which shows pictures of seniors doing each exercise, is placed at the table in front of the individual as both motivation and a reminder to exercise. Body weight is used to create resistance and strengthen muscles. CLTC has encouraged the use of this program by providing training for all provider sites over the past year.

Key to the program is a physician's clearance indicating no known preexisting health problems that would prevent the client from benefitting from

(continued on page 123)

On the Cover:

MAUDE EVELYN CALLEN, RN (1898-1990)

To "live in the house by the side of the road and be a friend of man" was the philosophy of life for Maude Callen. It was said of her, she "is a living example that helping others does help oneself."[1]

Born in Quincy, Florida, in 1898, Maude Callen was orphaned as a child and grew up living with an uncle. She graduated from Florida A&M University and received her nurse's training at the Georgia Infirmary at Savannah. She moved to Berkeley County, South Carolina in 1923 as a missionary nurse for the Protestant Episcopal Church and worked as a nurse and midwife in the Pineville area of Berkeley County on the edge of Hell Hole Swamp. She recalled "When I came up here, there wasn't a paved road in this area. There were no telephones or electric lights. There was no hospital. They had to travel by wagon or buggy to King Street (in Charleston)."[2] In 1936, she joined the Berkeley County Health Department. As a public health nurse, she instructed others in nutrition, homemaking, prenatal care, and birth control. She made home visits as well as holding clinics in churches, school buildings and homes. She provided inoculations, eye exams, dental exams, classes for midwives or expectant mothers, examinations for venereal disease and taught children to read and write. She was also instrumental in isolating contagious diseases by tracking down all of the people with whom the infected person may have come in contact. Her clinics were open to all comers and all ills. It was not Maude Callen's intention to compete with doctors. There were and are not enough doctors to cover the area so when she considered it needed, she took patients to the health department clinic or county hospital.

Dr. W. H. Lacey, former director of the Berkeley County Health Department is quoted as saying, "She has been to homes where it was impossible to get by wagon. She had to cross ditches and creeks by foot on logs. The Maude Callens of this world do not fade away; they just keep on and on with their magnificent work and dedication to the sick and suffering."[3]

"She had a zest for life and dedication to helping people. She should be remembered for dedicating her life to helping babies and old people," said Dr. Earl B. Higgins, executive assistant to the MUSC president for affirmative action and director of minority affairs.[4]

In the late 1940s, when Dr. William Fishburne, then director of the Berkeley County Health Department was asked if Mrs. Callen could take some time to teach for the state board of health, he replied, "if you have to take her, I can only ask you to join me in prayer for the people left here."[5]

Recognition for her contributions came in many forms. She was awarded the Order of the Palmetto by Governor Richard W. Riley, featured in a 1983 segment of "On the Road with Charles Kuralt," and in 1984, she went to New York to receive the highest award bestowed by the United Way of America, the Alexis De Tocqueville Society Award for her 60 years of service to Berkeley County. In addition, she received honorary degrees from Clemson (1983) and the Medical University of South Carolina (1989). *LIFE* Magazine did a photographic feature on her in December of 1951.

Johnnie T. Flynn, County Supervisor for Berkeley County, recounted at a ceremony in 1986 when "Miss Maude" was honored by the Berkeley County Chamber of Commerce, that she had once declined an invitation to the White House saying, "You can't just call me up and ask me to be somewhere. I've got to do my job."[6]

Eugene Smith, the *LIFE* photographer who did the photo essay of "Miss Maude," as she was called by her friends, described her by saying "she is near the pure ideal of what a life of affirmative contribution can be." [7] The *LIFE* magazine article brought contributions of over $25,000 which was used to build the Maude E. Callen Clinic. At the age of 85, "Miss Maude" was serving meals at the Clinic, which also served as the Senior Citizens Center, to about 50 elderly residents of Berkeley County, most of them younger than she.

In *Let Truth Be the Prejudice: W. Eugene Smith His Life and Photographs,* Smith gives this account: I traveled around South Carolina about 750 miles just talking to people. . . . I went to see Maude Callen. I had blinders on. I was disturbed, it was not right. I had not found the right person. But I turned back and asked if she minded my haunting her for six weeks. She truly did mind. There was no false modesty. . . . I went everywhere with her. . . . I talked to people and talked to doctors. I could think of only one person I could compare her to, Albert Schweitzer. And when I saw Schweitzer, I realized she was incomparable. She is the greatest person I have ever known. She left an indelible imprint on me." [8]

Jane McCutchen Brown, Curator
Waring Historical Library

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Alliance Page

SCMAA CONVENTION 1999

"HAPPINESS IS CARING, SHARING, AND DARING TO CHANGE"

In keeping with our theme, we "dared to change" the South Carolina Medical Association Alliance Convention to celebrate 76 years of service to our state.

All physicians spouses are invited to attend our Convention in Charleston on Thursday, April 29 and Friday, April 30, 1999. The registration will begin in the Alliance Presidential Suite in the Charleston Place Hotel on April 29. We will hold our luncheon and House of Delegates meeting at the Hibernian Hall on Meeting Street, next to the Mills House Hotel on April 30. This move has provided us with more space so we are able to hold our meeting concurrent with the SCMA and provide additional attractions. This change will allow your spouses to come to Charleston and enable both of you to enjoy the festivities together.

Following the registration on April 29, there will be an evening reception in the Presidential Suite, which will feature some hors d'oeuvres from our own cookbook, *Rx du' Jour*. Please join your spouses for this event.

On Friday, along with our House of Delegates meeting, there will be a delightful fashion show by Saks Fifth Avenue during our buffet luncheon. AMA Alliance President Colleen Adams and Southern Medical Auxiliary President Jeanny Kalayciogly will be our special guests. Please pre-register your spouse and/or guests so that we have a complete count of those attending. We will also have some very exclusive boutique shopping for your pleasure, at our Convention. **You do not have to be a delegate to attend this luncheon and boutique shopping.**

The boutiques are donating a portion of their sales to the Alliance, so our support is essential. Shopping begins at 9 a.m. Friday and will continue until 7:30 p.m. A wine and hors d'oeuvre reception will follow the House of Delegates meeting from 6-7:30 p.m. All physicians and their spouses are invited to attend.

On Saturday morning, May 1, Saks Fifth Avenue will open their doors from 8:30 a.m. to 10:30 a.m. for a special presentation and refreshments. Saks Fifth Avenue will donate 10 percent of the amount of your purchases made on that day to the SCMAA. Pre-shopping can begin on April 26 by mentioning to your sales associate you are with the SCMAA and wish to hold your purchases until May 1. We greatly appreciate all that Saks Fifth Avenue has agreed to do for us. Please tell your spouses that they may bring a guest. We don't want anyone to miss out on all the fun. Thank you for your support!

Convention Committee: Laurie Schwarz, Chair
Jeannie Lindler, Jean Lang

Student Page

Reenergized from a trip to Hawaii, the student leaders of the AMA-MSS at MUSC in Charleston are ready to take on many new challenges.

Before the Hawaii trip, several MUSC members were named to new leadership positions. Kristopher Crawford, a second year student, was nominated to be the student representative to the AMPAC board. Kris will be intimately involved in the grassroots political efforts of the AMA. In addition, Justin Favaro, a seventh year MD/Ph.D. student, was named to the medical student section Committee on Long-Range Planning. This year, the committee was asked to determine if changes were needed in the way students are represented in the MSS House of Delegates. Keith Borg was just nominated to serve his second consecutive year as the student representative to the American College of Emergency Physicians.

In addition to some fun in the sun, students from MUSC were very active at the Hawaii interim meeting. Justin Favaro served on Reference Committee B. Keith Borg, a sixth year MD/Ph.D. student, successfully lobbied on behalf of the American College of Emergency Physicians for the passage of a resolution which would study the reimbursement and availability of on-call physicians in emergency rooms. Kris Crawford attended his first AMPAC board meetings. In addition, two other students from MUSC, Elizabeth Hearon, a third year, and Peter Freedland, a second year, got some great experience in national AMA-MSS politics.

Students have been busy with several projects around campus. MUSC will host the 1999 Section IV meeting of medical students in September. We will host medical students from all over the southeast for a weekend mini-symposium. We are also developing an organized medicine elective for fourth year medical students. And finally, we are continuing our tradition of going out to the schools to teach kids the dangers of smoking, alcohol, and drugs. We have many students excited about making the trip to Chicago in June for the annual meeting.

We would like to thank the SCMA for their continued support of our efforts. See you in June!

(Letter to the Editor, *continued from page 119*)

the program. Additionally, this clearance provides reinforcement by the physician that exercise is important to all individuals regardless of age.

"Older adults can obtain significant health benefits with a moderate amount of physical activity," according to a recent report from the U.S. Surgeon General, which added, "Stronger muscles help reduce the risk of falling and improve the ability to perform the routine tasks of daily life."

As Medical Director of the Department of Health and Human Services, I welcome your endorsement of this "Placemat Strength Training Program" because the crucial role you play in being the chief health advisor to your patients will expedite their participation.

For more information on this program, call either Carol B. Cornman at the USC School of Public Health at (803) 777-5337, or me at (803) 253-6100. I would be delighted to provide materials for your evaluation.

Ira B. Horton, M. D.
Medical Director, SC Department of Health and Human Services
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Gray Matter

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Thornton & Thorne give the medical community something to think about this month.

HOW MUCH DO CIGARS COST?

How much does it cost to smoke cigars? If you buy life insurance, the cost will be significant. That's because most life insurance companies will not issue their lowest cost policies to cigar smokers.

There have been dramatic decreases in the cost of life insurance over the last few years. By far, the biggest premium decreases have been for insureds who do not use tobacco in any form and who otherwise qualify as preferred risks.

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The Manufacturers Life Insurance Company (USA) 10 Year Level Term (97)

The time period in which the insured may not have used tobacco varies from company to company. It is usually at least 24 months, and can be as long as 60 months, prior to the date of applying for the policy. And, yes, just an occasional cigar may disqualify an applicant for a no tobacco use policy!

The question reads *"have you used tobacco in any form in the past x months"?* Whether x equals 24 or 36 or some other number of months, the point is that even one cigar will prevent the applicant from receiving the best rate from the vast majority of companies. In fact, most will not allow cigar smokers to qualify for even their standard-risk, non-smoker policies (the second best rate).

There are a select few companies that will allow a cigar smoker to qualify for a preferred risk, no tobacco policy. These companies have a limit on the number of cigars that may be smoked. The maximum is usually in the range of 6-12 per year.

Views expressed herein are those of the authors only and in no way represent the SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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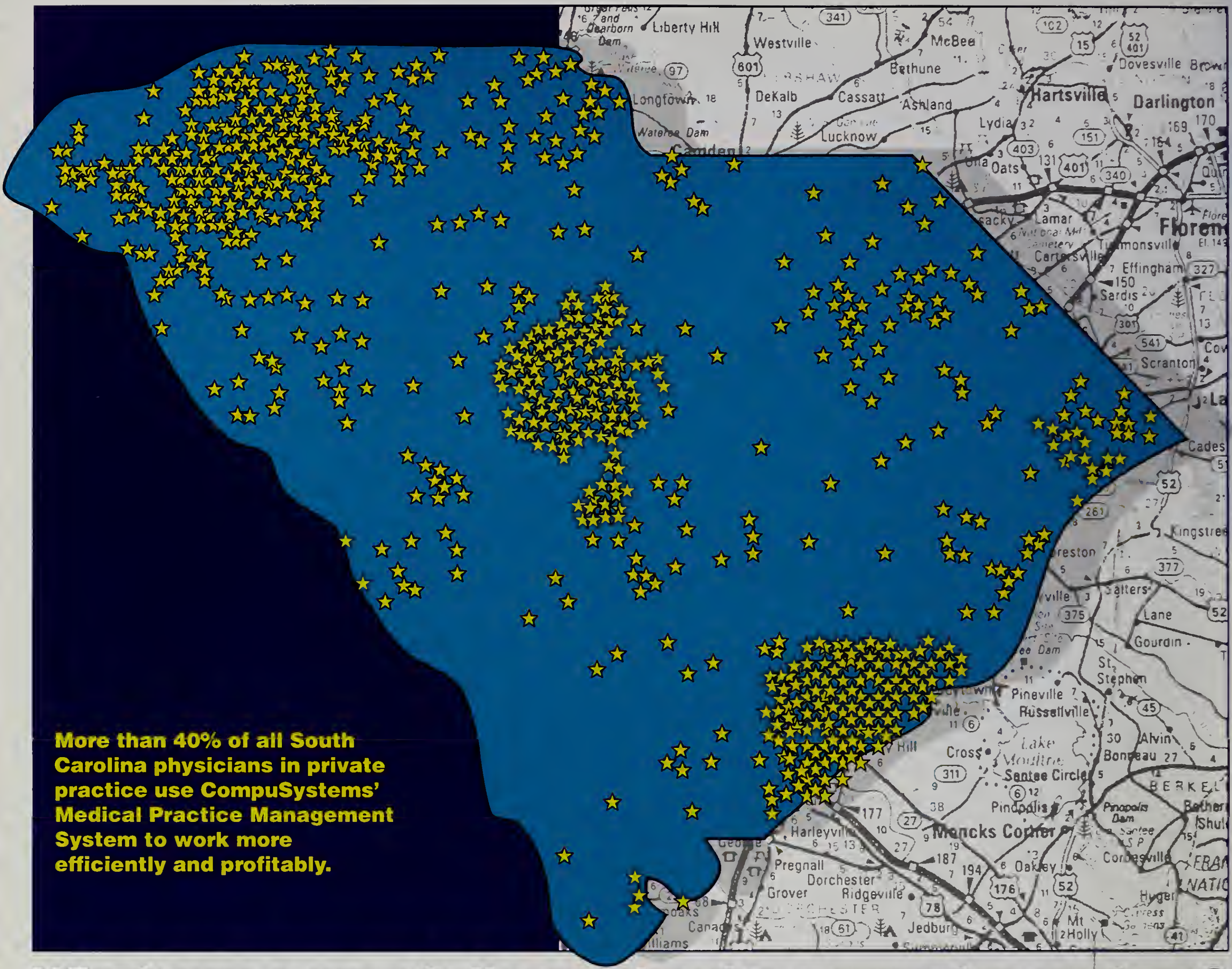

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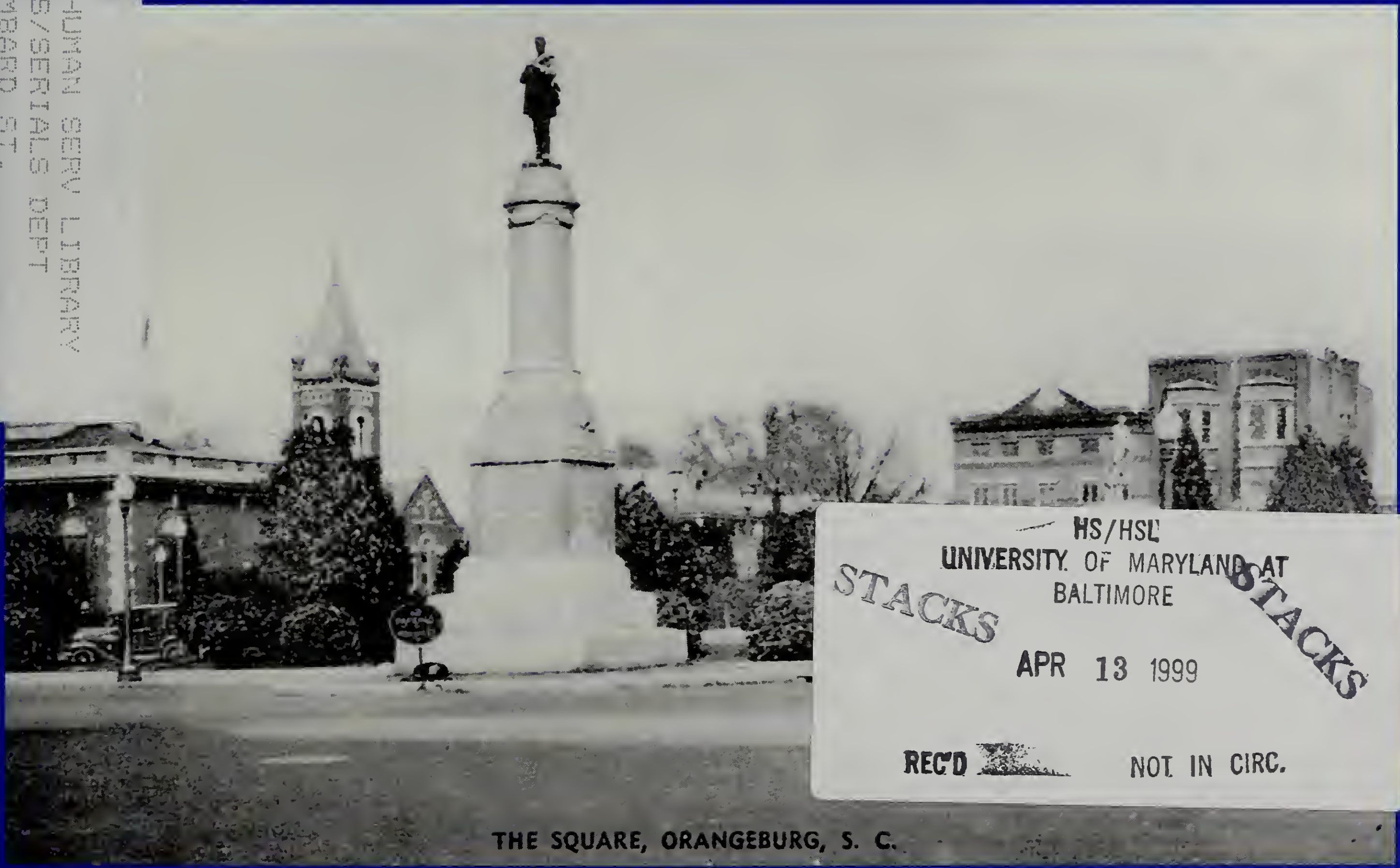

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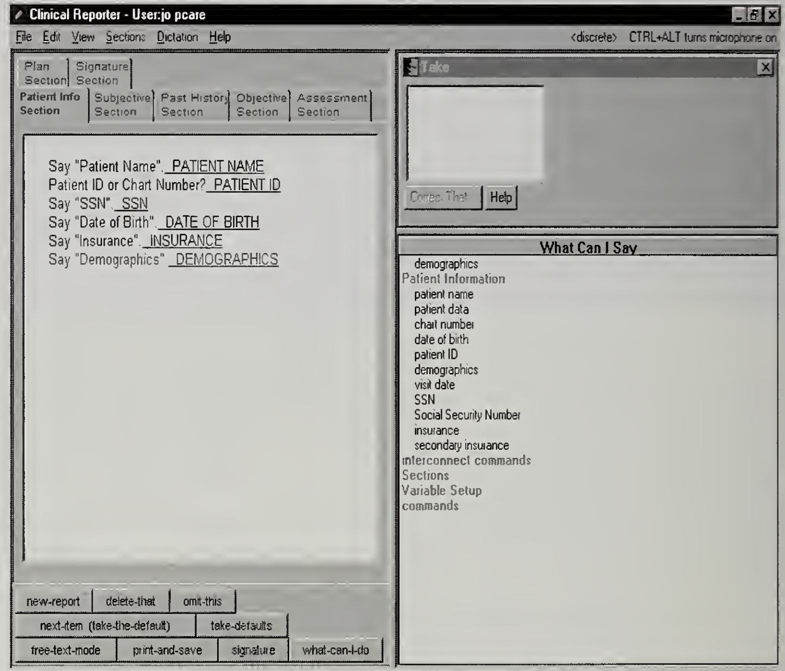

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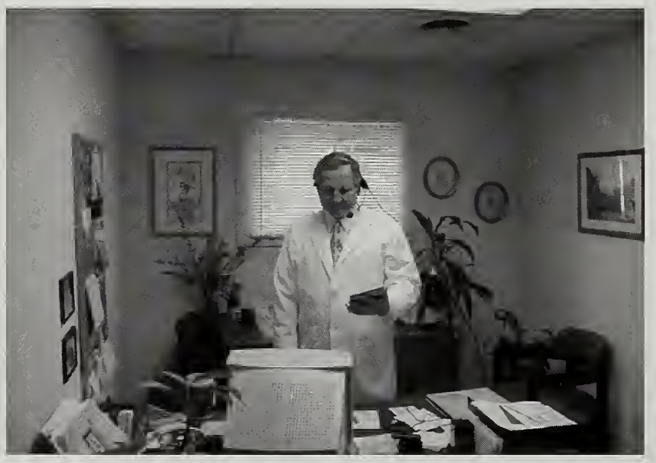

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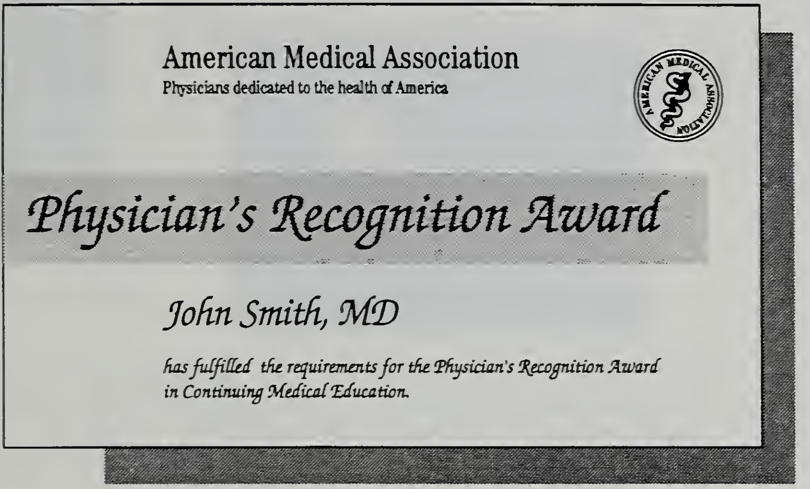

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Physician's Recognition Award

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Facts about the *Physician's Recognition Award*
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- One, two or three year certificates are provided, based on your needs.
- Your CME can be reported at any time.
- You can fax or mail your application. Applications are provided on the AMA home page (http://www.ama-assn.org) under the Medical Science and Education button.
- PRA staff will review hospital CME transcripts in place of the application form.
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President's Page

SWAN SONG

Twelve months have nearly come and gone since I took office last April. I now understand why past presidents have talked about the rapid passage of time. It really does not seem like twelve months have come and gone already. I want to thank Dr. Weston for his advice and assistance along the way.

Together, I believe we have all taken some important steps forward. We have negotiated successful patient protection legislation; we have developed a comprehensive long range plan and recruited key executives for our growing organizations; we have begun to strengthen our JUA and PCF malpractice insurance organizations; we have increased membership and carried the message of a strong national medical federation throughout the state. During this year, our Physicians Care Network has continued to be profitable and we have expanded the network into neighboring states. Our general insurance agency, Financial Services, Inc., has expanded to better serve us all. Our AMA presence has increased with the election of Dr. Smoak as Chairman of the Board of Trustees; soon to be President-Elect and with the election of Dr. Roberts as Chair of the Southeastern Delegation. We expanded our presence with the election of Dr. Hawk to the Council on Scientific Affairs (Dr. Brake is already on place on the Council on Legislation), and the addition of yet another specialty delegate/alternate from our state.

I have enjoyed the year immensely. It was nice to meet so many of you and serve you in different ways. You have afforded me a great honor that I will always cherish.

Please come to Charleston for the Annual Meeting and help me welcome Dr. Hester to the presidency.

Farewell

Stephen A. Imbeau, M. D.
President

The Journal OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

Volume 95
April 1999
Number 4

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SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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April 1999

MEDICARE UPDATE

Workshop Schedule

The following table shows specialty workshops PGBA has scheduled through April. Lack of registrants will force the workshops to be cancelled. Please refer to the April 1999 Medicare Advisory *for specific workshop locations.*

Topic	Date	Time	Place	PMT Due
Lab Billing	May 11	9 a.m.-11 a.m.	Greenville TBA	$20.00 4/26/99
Lab Billing	May 12	9 a.m.-11 a.m.	Columbia TBA	$20.00 4/26/99
Lab Billing	May 13	9 a.m.-11 a.m.	Charleston*	$20.00 4/26/99
Dermatology	May 11	1 p.m.-3 p.m.	Greenville TBA	$20.00 4/26/99
Dermatology	May 12	1 p.m.-3 p.m.	Columbia TBA	$20.00 4/26/99
Dermatology	May 13	1 p.m.-3 p.m.	Charleston*	$20.00 4/26/99
855 Forms Made Easy	May 19	9 a.m.-12 p.m.	BCBS Auditorium I-20 at Alpine Rd. Columbia (788-0222)	$20.00 5/3/99
How to Survive a Post Pay Audit	June 15	9 a.m.-11 p.m.	Greenville*	$20.00 6/1/99
How to Survive a Post Pay Audit	June 16	9 a.m.-11 p.m.	Columbia*	$20.00 6/1/99
How to Survive a Post Pay Audit	June 17	9 a.m.-11 p.m.	Charleston*	$20.00 6/1/99
Claims Status Inquiry (CSI)	June 15	1 p.m.-3 p.m.	Greenville*	$20.00 6/1/99
Claims Status Inquiry (CSI)	June 16	1 p.m.-3 p.m.	Columbia*	$20.00 6/1/99
Claims Status Inquiry (CSI)	June 17	1 p.m.-3 p.m.	Charleston*	$20.00 6/1/99

*** Workshop Locations**
Greenville: Crown Plaza Greenville, 851 Congaree Rd., (864) 297-6300; **Columbia:** Embassy Suites, 200 Stoneridge Dr., (803) 252-8700; **Charleston:** Hilton Charleston North, 4770 Goer Dr., (843) 747-1900; **Myrtle Beach:** Holiday Inn West on the Waterway, 101 Outlet Blvd., (843) 699-4241; **Florence:** Ramada Inn, 2038 W. Lucas St., (843) 236-1000; **Spartanburg:** Spartanburg Technical College, Business I-85 at New Cut Rd., (864) 591-3622.

MEDICAID UPDATE

Carolina Medical Review Asthma Study

Results of a recent study completed by the Carolina Medical Review found low South Carolina adherence rates to national guidelines for diagnosis and treatment of asthma. Treatment fell short in the following areas:

- Steroid use as an outpatient
- Addressing patient/family compliance
- In-hospital arterial blood gas measurements
- Utilization of the peak flow meters during hospitalization
- Documentation regarding education on the use of peak flow meters

Documentation of spacer device usage and consideration of gastroesophageal reflux disease were also uncommon. Claims analysis revealed a low proportion of discharges with outpatient follow-up within ten days as well as a limited number of discharges followed by steroid claims within thirty days.

Carolina Medical Review conducted the study as one of a number of Medicaid quality of care studies in progress for the South Carolina Department of Health and Human Services. The study reviewed adherence to guidelines for the diagnosis and treatment of asthma established by Expert Panel 1 of the National Institutes of Health (NIH). Specifically, the quality indicator categories included prehospitalization factors, inpatient evaluation and treatment, asthma teaching/education, and discharge planning. The review assessed variations in levels of adherence to guidelines by age group (under two years versus two years and older), county hospitalization rates (high versus low), and type of hospital (children's versus non-children's). Further claims analysis compared post-hospitalization factors to inpatient adherence.

The Department of Health and Human Services, in partnership with Carolina Medical Review and other interested parties, will be developing a number of strategies to improve adherence to the NIH guidelines in South Carolina.

For more information, contact Nelson Gunter, MD, Carolina Medical Review, 250 Berryhill Road, Suite 101, Columbia, SC 29210 (803) 731-8225

SCMA ANNUAL MEETING
APRIL 29-MAY 2, 1999
CHARLESTON PLACE HOTEL

As this newsletter goes to press, final plans are under way for the 151st South Carolina Medical Association Annual Meeting and Scientific Assembly. Awards which will be presented during the House of Delegates on Sunday morning include:

1999 Award for Excellence in Medical and Health Care Reporting: *Ms. Pamela Graham, Ms. Sandra Renrick, Mr. Rich Johnston, and Ms. Mary Lu Daubenspeck of WSPA-TV* in Spartanburg are the winners in the broadcast journalism category for their series of reports and a call-in session entitled "Beyond Breast Cancer." The health special generated a tremendous response from the community. *Ms. Alice Sherrill* is the winner in the print journalism category for her article on prostate cancer which appeared in *The Lancaster News*. The story focused on the life of a prostate cancer survivor and discussed treatment options for this type of cancer.

1999 Service to the Community Award: *Greenville County Medical Society* is this year's winner of the SCMA Service to the Community Award for the publication of the *Health Care Coverage Information Booklet*. The booklet has proven to be an excellent resource to educate employers and their employees about choosing a health care plan and working with it once the choice has been made.

SCMA Physician of the Year Award for Community Service: *Gary Goforth, MD*, Medical Director of the Montgomery Center for Family Medicine at Self Memorial Hospital in Greenwood, has been selected as the recipient of the SCMA Physician of the Year Award for Community Service.

See the Schedule of Events in this issue of The Journal *for a complete list of social activities, business meetings, and scientific sessions. Be sure to take time to visit all of our exhibitors before and after meetings and during the coffee breaks. If you are not preregistered, call the SCMA today.*

FREE LONG DISTANCE

From April 29th to May 1st you can make free long distance phone calls. All you have to do is stop by the Practice Management Services, Inc. booth at the Annual Meeting. No joke! We'll be there waiting for you to come and take advantage of our free long distance. And be sure to ask how PMSI can help you save money on all of your long distance phone bills. Business, residential, and calling card rates are lower than ever! Come check it out!

CAPSULES

Stephen A. Imbeau, MD, has been appointed to the Practicing Physician Advisory Committee (PPAC) of the Health Care Financing Administration (HCFA). Dr. Imbeau is one of only 15 physicians in the country named to the council that reports to the federal government on Medicare and Medicaid issues.

C. Morrison Farish, MD and ***Francis Rushton, MD***, have been appointed to Governor Jim Hodges' First Steps Board.

Carol A. Pinner, III, MD, of Peak, has been selected as Wellspring Resource Center's 1999 Physician of the Year.

The Lyme Disease Foundation will hold a seminar on the disease April 29, 1999, from 7-10 p.m. at Richland Memorial Hospital. For more information, call Sue Fox at (803) 750-5082.

SCMA WORKSHOPS

OSHA COMPLIANCE FOR MEDICAL PRACTICES
May 6, 1999

Most medical compliance officers worry about complicated and changing regulations put forth by the Occupational Safety and Health Administration (OSHA). With the emphasis on patient care and subsequent reduced time for other responsibilities, how do you keep the employees working safely and the practice ready for an OSHA inspection? This workshop will take you through all state and federal OSHA regulations and bring you up-to-date on what you need to know to provide a safe work environment for medical offices. Register by April 26, 1999.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

COMPUTERIZED PATIENT RECORDS
May 19, 1999

Computerized patient records (CPR) is the current topic of discussion in medical offices around the state. This workshop will help you separate the reality from the rhetoric with an objective, nitty-gritty evaluation of CPR systems. Emphasis will be on the practical questions that medical practices must consider when they think about CPR. Register by May 10, 1999.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, ext. 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

WANT TO KNOW HOW YOU STACK UP WITH YOUR E&M UTILIZATION?

While the key to selection of any CPT code should be the supporting documentation, evidence of undercoding may indicate possible lost revenues. On the flip side, overcoding may indicate the possibility of potential liability issues. Let us compare your distribution of E & M services with expected patterns found in national distribution information for your specialty. We will provide you with both a numerical and graphical analysis of the comparison and you can see just how you really do stack up.
For more information, call Anne Harvin Gavin at (800) 327-1021, extension 260.

PHYSICIANS RECOGNITION AWARD

The following SCMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned.

William R. Greene, MD
Michael J. Lancaster, MD
John Thos Queenan, MD
John Pickens Taylor, MD
Robert Bruce Borucki, MD
James Raymond Carroll, MD
Joseph James Davey, MD
F. Marion Dwight, MD
Gerald Edward Harmon, MD
Kenenth Bryan Heller, MD
Malvern C. Holland, MD
Rosanne Jordan Hooks, MD
R. Duren Johnson, MD
Craig M. Novy, MD
Ralph Seer Owings, MD
Jeffrey Carter Poole, MD
Woodrow Byron Williams, MD
Charles Michael Wolff, MD
Thomas James Bell, MD
Martin F. Carmichael, MD
James Duckett Hammond, MD
Jay Michael Markowitz, MD
Bryan Lawrence Ohning, MD
Susan Du Barry Reynolds, MD
John Joseph Ryan, MD
Michael C. Watson, MD
Thomas A. Whitaker, MD

PHYSICIANS CARE NETWORK UPDATE

Currently, there are 7,027 participating physician locations, 779 participating ancillary locations and 96 participating hospitals. PCN has 100 contracted groups with 60,811 covered lives. We will continue to provide information as contracts are received.

NEW GROUPS:

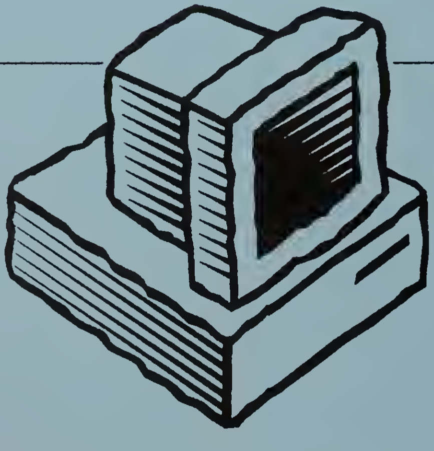
- Nan Ya Plastics Corp. America; Lake City; effective 4/1/99; Access/Peer Review
- CTE, Inc; Spartanburg; effective 3/1/99; Access/Peer Review
- Carolina Cardiovascular Consultants; effective 3/1/99; Seneca; Access/Peer Review
- Ideal Promotions; effective 3/1/99; Spartanburg, Access/Peer Review
- Tands Movers and Erectors; effective 3/1/99; Spartanburg; Access/Peer Review
- Wolff Industries; effective 3/1/99; Spartanburg; Access/Peer Review
- Sumter Coating, Inc; effective 3/1/99; Sumter, Access/Peer Review

TERMINATIONS:

- Columbia Skin Clinic: 3/1/99
- Professional Employer Group: 3/1/99
- Wells Aluminum: 4/1/99
- Sales International: 1/1/99

** Nan Ya Plastics Corp. employees will not have received corrected i.d. cards by their effective date of 4/1/99. Questions regarding the benefits and/or eligibility of Nan Ya employees may be directed to their TPA, Care Source at (800) 223-3943.

If you have questions about PCN, please contact Judy Legg, Network Coordinator, PCN at (803) 798-6207, extension 257 or statewide at 1-800-327-1021. You can also send an e-mail message to judy@scmanet.org.



LEGISLATIVE UPDATE AVAILABLE ON-LINE

Be sure to check the progress of senate and house bills that the SCMA is monitoring. You can visit the SCMA website at www.scmanet.org for updates on the bills, their status, and the position that the SCMA has taken on each. To visit, log on to the SCMA homepage. The *Legislative Update* can found under the *Legislative Activity* menu.

The Journal OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 95 APRIL 1999 NUMBER 4

THE ONE HUNDRED FIFTY-FIRST ANNUAL MEETING

THE CHARLESTON PLACE HOTEL

CHARLESTON, SOUTH CAROLINA

APRIL 29-MAY 2, 1999

The 151st Annual Meeting of the South Carolina Medical Association (SCMA) will mark 19 consecutive years in Charleston and the 13th consecutive year at the Charleston Place Hotel.

Information regarding the meeting, including registration and hotel reservation forms, has been mailed to all South Carolina physicians, but if you have not received this information, call the SCMA headquarters in Columbia at (803) 798-6207 or (800) 327-1021, statewide. Again, there is no registration fee for SCMA members, and pre-registration is encouraged.

The House of Delegates meets to consider the business of the association on Friday, April 30, and again on Sunday morning, May 2. Reference committees will meet on Friday afternoon.

A total of 11.75 hours of Category 1 credit toward the Physician's Recognition Award of the American Medical Association have been approved by the SCMA beginning on Thursday afternoon and ending on Saturday afternoon. Consult the Schedule of Events which follows, for details on all programs. The shaded areas in the Schedule of Events indicate programs approved for continuing medical education credit through the SCMA. Each physician should claim only those hours of credit which he or she actually spent in the educational activity.

Our special guest for the Annual Meeting is Edgar Ratcliffe Anderson, Jr., M. D., Executive Vice President and Chief Executive Officer of the American Medical Association. He will address the House of Delegates on Friday.

Again this year, the SCMA will serve as the umbrella organization for many specialty societies who will hold business and scientific sessions during the Annual Meeting.

The SCMA Board of Trustees will meet on Thursday, April 29 and at breakfast each day to consider business which arises during the House of Delegates meetings.

The Journal contains only the officer and subsidiary reports available at publication deadline. Additional reports and resolutions will only be included in the delegates' handbooks which will be mailed prior to the meeting. Delegates are asked to bring their handbooks to the meeting or to pass them along to alternate delegates if they are unable to attend.

—DK

ONE HUNDRED FIFTY-FIRST ANNUAL MEETING SCHEDULE OF EVENTS

Thursday, April 29, 1999

TIME/LOCATION	EVENT
11:30 a.m.-7:00 p.m. 2nd Floor Grand Hall	SCMA Registration - Open
12:15 p.m.-1:00 p.m. Charleston Grill	SCMA Board of Trustees Luncheon
12:30 p.m.-3:00 p.m. Mills House Hotel	Alliance Past Presidents' Luncheon (By Invitation Only)
1:00 p.m.-5:00 p.m. Willow Ballroom	SCMA Board of Trustees Meeting
1:00 p.m.-5:00 p.m. Magnolia Ballroom	SCMA Plenary Session "What's New in..."
1:00-1:20	"Current Screening Process for Colon Cancer" March E. Seabrook, MD, Columbia, SC
1:20-1:40	"Current Screening Process for Breast Cancer" Mary B. Rippon, MD, Greenville, SC
1:40-2:00	"Preventing Cancer" Daniel W. Nixon, MD, Hollings Cancer Center, Charleston, SC
2:00-2:15	Question and Answer Session
2:15-2:25	Break
2:25-2:45	"Medical Treatment of Congenital Heart Disease" Robert A. Rauniker, MD, Greenville, SC
2:45-3:05	"Overview of Noninvasive Diagnosis of Peripheral Vascular Disease" Spence Taylor, MD, Greenville, SC
3:05-3:25	"Alternative Medicine" Sharm Steadman, PharmD, USC School of Medicine, Columbia, SC
3:25-3:40	Question and Answer Session

Thursday, April 29, 1999 (cont.)

TIME/LOCATION	EVENT
3:40-3:50	Break
3:50-4:10	"Treating Hearing Impaired or Disabled Patients/ ADA Compliance" Peter C. Weber, MD, MUSC, Charleston, SC
4:10-4:30	"Diagnostic Evaluation and Treatment of Depression" Mark S. George, MD, MUSC, Charleston, SC
4:30-4:50	"Board of Medical Examiners - Protecting Your License and New Regulations" Hartwell Z. Hildebrand, MD, Rock Hill, SC
4:50-5:00	Question and Answer Session
3:00 p.m.-5:00 p.m. Alliance President's Suite	Alliance Registration and Hospitality
3:00 p.m.-7:00 p.m. Dogwood/Cypress/Live Oak Ballrooms and Grand Hall	Exhibitors Set Up
5:00 p.m.-6:30 p.m. Alliance President's Suite	Alliance Reception (All SCMA Members and Spouses Welcome)
6:00 p.m.-8:00 p.m. Magnolia Ballroom	SCMA Young Physicians' Section House of Delegates
8:00 p.m.-9:00 p.m. Roof Garden (Backup: Jenkins/King Room)	SCMA Young Physicians' Section Reception (Supported by SCMA Financial Services)

Friday, April 30, 1999

7:00 a.m.-5:00 p.m. 2nd Floor Grand Hall	SCMA Registration - Open
7:00 a.m.-8:00 a.m. Charleston Grill	SCMA Board of Trustees and Past Presidents' Breakfast
7:00 a.m.-8:00 a.m. Edmunds Room	Interspecialty Council and Specialty Society Delegates Meeting

Friday, April 30, 1999 (cont.)

TIME/LOCATION	EVENT
7:30 a.m.-8:30 a.m. Booths 9 & 65	Coffee/Juice
7:30 a.m.-6:00 p.m. Dogwood/Cypress/Live Oak Ballrooms and Grand Hall	Exhibits Open
8:00 a.m.-9:00 a.m. Fenwick Room	SC Cardiopulmonary Rehabilitation Association Outcomes Committee Meeting
8:00 a.m.-11:30 a.m. Willow/Magnolia Ballrooms	SCMA House of Delegates
8:00 a.m.-12:00 p.m. Hibernian Hall	Alliance Registration - Open
9:00 a.m.-11:30 a.m. Colleton Room	SC Cardiopulmonary Rehabilitation Association Board of Directors Meeting
9:00 a.m.-4:00 p.m. Hibernian Hall	Alliance Member Services Booth
9:00 a.m.-7:30 p.m. Hibernian Hall	Alliance Boutique Shopping
9:30 a.m.-10:30 a.m. Hibernian Hall	Alliance Executive Board Meeting
9:45 a.m.-10:45 a.m. Booths 9 & 65	Coffee Break (Supported by Info Avenue)
10:00 a.m.-11:00 a.m. Riley Room	MUSC Medical Alumni Board Meeting
11:00 a.m.-12:30 p.m. 2nd Floor Grand Hall	SC Cardiopulmonary Rehabilitation Association Registration
11:00 a.m.-12:30 p.m. Hibernian Hall	Alliance Luncheon and Fashion Show
12:00 noon-1:00 p.m. Riley Room	SC Chapter of the American Academy of Pediatrics Perinatal Section Executive Committee Luncheon

Friday, April 30, 1999 (cont.)

TIME/LOCATION	EVENT
12:00 noon-1:30 p.m. Charleston Grill	SCMA Young Physicians' Section Luncheon & Meeting (Supported by the AMA Young Physicians Section)
12:00 noon-1:30 p.m. Suite 2G	SC Society of Anesthesiologists Executive Committee Luncheon Meeting
12:00 noon-4:30 p.m. Jenkins/King Room	SC Dermatological Association Scientific Session and Business Meeting
12:00-12:45	"Management of Refractory Acne" Alan R. Shalita, MD, State University of New York, Brooklyn, NY (Supported by Ortho Pharmaceutical Corporation)
12:45-12:50	Question and Answer Session
12:50-1:35	"Topical Retinoids Old and New" Alan R. Shalita, MD, State University of New York, Brooklyn, NY (Supported by Ortho Pharmaceutical Corporation)
1:35-1:40	Question and Answer Session
1:40-1:50	Coffee Break
1:50-2:35	"An Update on Drug Interactions" Harry I. Katz, MD, University of Minnesota Hospitals, Minneapolis, MN (Supported by Novartis Pharmaceuticals)
2:35-2:40	Question and Answer Session
2:40-3:25	"Surgery of Nails" Richard K. Scher, MD, Columbia University, New York, NY (Supported by Janssen Pharmaceutica)
3:25-3:30	Question and Answer Session
3:30-4:30	Business Meeting
12:30 p.m.-1:30 p.m. Edmunds Room	Reference Committee Chairpersons' Luncheon

Friday, April 30, 1999 (cont.)

TIME/LOCATION	EVENT
12:30 p.m.-2:30 p.m. Beauregard Room	SCMA Seminar: "New Drug Update" C. Wayne Weart, PharmD, MUSC, Charleston, SC
12:30 p.m.-2:30 p.m. Drayton Room	SC Psychiatric Association Scientific Session
12:30-1:25	"Current Concepts in the Treatment of Addictions" Kathleen T. Brady, MD, MUSC, Charleston, SC
1:25 -1:30	Question and Answer Session
1:30-2:25	"Side Effects of Psychotropic Medications, Recognition and Management" Lawrence A. Labbate, MD, Charleston, SC
2:25-2:30	Question and Answer Session
12:45 p.m.-5:00 p.m. Magnolia Ballroom	SC Cardiopulmonary Rehabilitation Association Symposium
12:45-1:00	Opening Remarks and Award Presentation M. Donald Alexander, MD, President, SC Cardiopulmonary Rehabilitation Association
1:00-2:00	"Building a Continuum of Care for the 21st Century" Linda K. Hall, PhD, Baptist Memorial Healthcare System, Memphis, TN
2:00-2:45	"Non-Operative Management of Intermittent Claudication" William M. Moore, Jr., MD, West Columbia, SC
2:45-3:00	Break
3:00-3:45	"Reimbursement and Managed Care" Diane L. Vogel, RN, BryanLGH, Medical Center, Lincoln, NE
3:45-5:00	Round Tables: (Attendees will be able to attend two round tables)
	"The Art of Exercise Prescription" J. Larry Durstine, PhD, USC, Columbia, SC Kimberly Wood Woeber, PhD, USC, Aiken, SC

Friday, April 30, 1999 (cont.)

TIME/LOCATION	EVENT
	"How You Can Help Your Patient Stop Smoking" Greg White, Lung Association of SC, Columbia, SC
	"Pulmonary Rehabilitation-A Few More Details..." Mark Stout, MS, Lexington Medical Center, West Columbia, SC
	"The Importance of Body as Barometer in Stress Management" Bren J. Schell, NTS, Columbia, SC
	"Reimbursement and Medicare" Diane L. Vogel, RN, BryanLGH Medical Center, Lincoln, NE
	"Type 2 Diabetes and Heart Disease - The Role of Weight Management and Exercise" Patricia L. Pelletier, RNCS, ANP, CDE Charleston, SC
12:45 p.m.-2:15 p.m. Willow Ballroom	MUSC Alumni Luncheon
1:00 p.m.-3:30 p.m. Suite 2J	SC Chapter of the American Academy of Pediatrics Perinatal Section Scientific Session and Business Meeting
1:00-2:30	"The NICU—Lessons from the Past—Visions of the Future—How to Prepare for Change" Donald S. Basler, FACHE, Health Care Concepts, Inc., Greenville, SC
2:30-3:30	Business Meeting
1:00 p.m.-4:30 p.m. Hibernian Hall	Alliance House of Delegates
1:30 p.m.-3:00 p.m. Hampton, Fenwick and Gadsden Rooms, Suite 2E	SCMA Reference Committee Meetings (Specific room assignments will appear in Delegates Handbook)
2:00 p.m.-4:00 p.m. Suite 2K	SC Society of Anesthesiologists Office/ Business Managers Development Meeting
2:00 p.m.-4:00 p.m. Colleton Room	MERCER (Financial Planning) "21st Century Financial Strategies for Physicians" Howard M. Rochestie, JD, LLM, Director of Mercer Global Advisors, Santa Barbara, CA

Friday, April 30, 1999 (cont.)

TIME/LOCATION	**EVENT**
2:15 p.m.-3:15 p.m. Booths 9 & 65	Coffee Break
2:30 p.m.-5:30 p.m. Suite 2L	SCMA Workshop: "The Four Most Statistically Important Health Problems in South Carolina"
2:30 p.m.	Introduction - Spence Taylor, MD
2:30 p.m.-3:10 p.m.	"Maternal/Infant Health: A Problem?"
2:30-2:45	"Maternal/Infant Health - Gains Made on A Serious Health Problem in Our State" Marie Meglen, CNM, Columbia, SC
2:45-3:00	"Maternal/Infant Health - A Persistent Problem in Our State" Thomas C. Hulsey, MSPH, ScD, Charleston, SC
3:00-3:10	Question and Answer Session
3:10 p.m.-3:50 p.m.	"Stroke"
3:10-3:25	"Stroke in South Carolina - Prevalence and Location" Martin Crane, PhD, Greenville, SC
3:25-3:40	"Stroke: Common Problems in Treatment and Early Intervention" Dexter Morris, MD, Chapel Hill, NC
3:40-3:50	Question and Answer Session
3:50 p.m.-4:10 p.m.	Break
4:10 p.m.-4:50 p.m.	"Smoking Related Cancers in Males"
4:10-4:25	"Tobacco Use in Our State - What is the Problem?" Daniel W. Nixon, MD, Charleston, SC
4:25-4:40	"What Should We Be Asking Our Patients and What Should We Examine?" Charles E. Smith, Jr., MD, Greenville, SC
4:40-4:50	Question and Answer Session

Friday, April 30, 1999 (cont.)

TIME/LOCATION	EVENT
4:50 p.m.-5:30 p.m.	"Sexually Transmitted Disease/Cervical Cancer"
4:50-5:05	"Is This a True Problem in Our State and Why?" James J. Gibson, MD, MPH, USC School of Medicine, Columbia, SC
5:05-5:20	"What Do We Need to Do About This Problem?" R. Norman Taylor, MD, Rock Hill, SC
5:20-5:30	Question and Answer Session
3:00 p.m.-5:00 p.m. Edmunds Room	SC Oncology Society Scientific Session
3:00-4:50	"Pain Management" Gregory A. Formanek, MD, Greenville, SC
4:50-5:00	Question and Answer Session
3:00 p.m.-5:00 p.m. Hampton, Fenwick, and Gadsden Rooms	SCMA Reference Committee Meetings (Specific room assignments will appear in Delegates Handbook)
4:00 p.m.-5:00 p.m. Drayton Room	USC School of Medicine Alumni Association Meeting
4:00 p.m.-6:00 p.m. Dogwood/Cypress/Live Oak Ballrooms and Grand Hall	SCMA Reception Honoring Delegates, Alternates, Speakers and Exhibitors (All Registrants Welcome) (Partial Support Provided by NBSC - National Bank of South Carolina)
5:00 p.m.-7:00 p.m. 2nd Floor Terrace (Backup: Beauregard Room)	USC School of Medicine Alumni and Faculty Reception
5:30 p.m.-7:30 p.m. Suite 2G	SC Chapter of the American Academy of Pediatrics Cocktail Reception
6:00 p.m.-7:00 p.m. Hibernian Hall	Alliance Wine and Hors D'oeuvres Reception
6:30 p.m.-9:00 p.m. Old Exchange Building	SC Society of Anesthesiologists Reception and Dinner

Friday, April 30, 1999 (cont.)

TIME/LOCATION	EVENT
7:00 p.m.-10:00 p.m. Coburg Dairy Conference Center	1943 MUSC Class Reunion
7:30 p.m.-9:00 p.m. The Confederate Home	SC Dermatological Association Reception

Saturday, May 1, 1999

7:00 a.m.-1:15 p.m. 2nd Floor Grand Hall	SCMA Registration Open
7:30 a.m.-8:30 a.m. Fenwick Room	Editorial Board Breakfast Meeting
7:30 a.m.-8:30 a.m. Charleston Grill	SCMA Board of Trustees Breakfast
7:30 a.m.-8:45 a.m. Suite 2L	SC Society of Anesthesiologists Breakfast Meeting (SCSA Members Only)
7:30 a.m.-9:00 a.m. Ashley Cooper Room	Residents Breakfast Meeting (supported by the AMA Resident Physicians Section)
7:30 a.m.-9:30 a.m. Booths 9 & 65	Continental Breakfast
7:30 a.m.-8:00 a.m. Gadsden Room	SC Vascular Surgery Society Continental Breakfast
7:30 a.m.-8:15 a.m. Willow Ballroom	SC Cardiopulmonary Rehabilitation Association Continental Breakfast
7:30 a.m.-9:00 a.m. Suite 2K	SC Chapter of the American Academy of Pediatrics Executive Committee Meeting
7:30 a.m.-12:00 noon Dogwood/Cypress/Live Oak Ballrooms and Grand Hall	Exhibits Open
7:45 a.m.-8:15 a.m. Magnolia Ballroom	SC Dermatological Association Continental Breakfast
8:00 a.m.-10:00 a.m. Suite 2G	Business Meeting and Continental Breakfast of the SC Society of Pathologists

Saturday, May 1, 1999 (cont.)

TIME/LOCATION	EVENT
8:00 a.m.-11:00 a.m. Beauregard Room	SC Association of Neurological Surgeons Business Meeting
8:00 a.m.-11:30 a.m. Hampton Room	SC Vascular Surgery Society Scientific Session and Business Meeting
8:00-10:00	Academic Presentations of Society Members
10:00-11:00	"Vascular Surgeons of the '90s Dealing With Endovascular Surgery" Jock R. Wheeler, MD, Eastern Virginia Medical School, Norfolk, VA
11:00-11:30	Business Meeting
8:15 a.m.-11:45 a.m. Magnolia Ballroom	SC Dermatological Association Scientific Session
8:15 -9:00	"Potpourri of Nail Cases" Richard K. Scher, MD, Columbia, University, New York, NY (Supported by Janssen Pharmaceutica)
9:00-9:05	Question and Answer Session
9:05-9:50	"Practical Psychodermatology" John Koo, MD, University of California, San Francisco, CA (Supported by Westwood-Squibb Pharmaceuticals)
9:50-9:55	Question and Answer Session
9:55-10:05	Coffee Break
10:05-10:50	"Update in Psoriasis" John Koo, MD, University of California, San Francisco, CA (Supported by Westwood-Squibb Pharmaceuticals)
10:50-10:55	Question and Answer Session
10:55-11:40	"New Treatment Options in Severe Psoriasis" Harry I. Katz, MD, Columbia University, New York, NY (Supported by Janssen Pharmaceutica)
11:40-11:45	Question and Answer Session

Saturday, May 1, 1999 (cont.)

TIME/LOCATION	EVENT
8:15 a.m.-12:30 p.m. Willow Ballroom	SC Cardiopulmonary Rehabilitation Association Symposium
8:15-8:30	Opening Remarks
8:30-9:45	"New Insights into Cholesterol Lowering and Risk Factor Reduction" Barry A. Franklin, PhD, William Beaumont Hospital, Birmingham, MI
9:45-10:45	"Pulmonary Rehabilitation: Efficient, Effective, and Economical Care" Jane Z. Reardon, MSN, CS, FAACVPR, Hartford, CT
10:45-11:00	Coffee Break
11:00-12:15	"The Key to Excellence" Wayne M. Sotile, PhD, Sotile Psychological Associates, Winston-Salem, NC
12:15-12:30	Question and Answer Session
8:30 a.m.-9:00 a.m. Colleton Room	SC Chapter of the American Academy of Pediatrics Continental Breakfast
8:30 a.m.-9:30 a.m. Charleston Grill	SCMA Financial Services, Inc. Board of Directors Meeting (Breakfast will be available at 8:15 a.m.)
8:30 a.m.-10:30 a.m. Saks Fifth Avenue	Private Alliance Shopping and Trunk Show
8:30 a.m.-11:30 a.m. Drayton Room	SCMA Plenary Session: "Infectious Diseases"
8:30-9:10	"Antibiotic Update and the Problem of Drug-Resistant Bacteria" Charles S. Bryan, MD, USC School of Medicine, Columbia, SC
9:10-9:15	Question and Answer Session
9:15-9:55	"Emerging Pathogens I. Bacteria and Rickettsia" J. Robert Cantey, MD, MUSC, Charleston, SC
9:55-10:00	Question and Answer Session

Saturday, May 1, 1999 (cont.)

TIME/LOCATION	EVENT
10:00-10:40	"Emerging Pathogens II. Viruses" Edwin A. Brown, MD, MUSC, Charleston,SC
10:40-10:45	Question and Answer Session
10:45-11:25	"Antiretrovial Therapy: What's New?" Bosko Postic, MD, Columbia, SC
11:25-11:30	Question and Answer Session
8:45 a.m.-12:30 p.m. Jenkins/King Room	SC Society of Anesthesiologists Scientific Session: "Gizmos, Gadgets, and Government in Anesthesia 1999"
8:45-9:00	Introductions
9:00-9:45	"Computers in Anesthesia" Frank Overdyk, MD, MUSC, Charleston, SC
9:45-10:30	"Fraud and Abuse in Medicine" Barbara Bowman, CPC, Florence, SC
10:30-10:45	Break
10:45-11:30	"How to Avoid Fraud and Abuse with Anesthesia Billing" Barbara Bowman, CPC, Florence, SC
11:30-12:15	"Bispectral Analysis: Monitoring the Hypnotic Effects of Anesthetics" Frederick B. Payne, Jr., MD, Fayetteville, NC (Supported by Aspect Medical)
12:15-12:30	Question and Answer Session
9:00 a.m.-11:00 a.m. Suite 2E	SC Orthopaedic Association Business Meeting
9:00 a.m.-12:30 p.m. Suite 2J	SC Society of Physical Medicine and Rehabilitation Scientific Session and Business Meeting
9:00-9:50	"Treatment of the Painful Facet Syndrome" Gerald D. Schuster, MD, Charleston, SC
9:50-10:00	Question and Answer Session

Saturday, May 1, 1999 (cont.)

TIME/LOCATION	EVENT
10:00-10:50	"Selective Inhibition of Cyclooxygenase-2: Therapeutic Implications" Perry V. Halushka, MD, MUSC, Charleston, SC
10:50-11:00	Question and Answer Session
11:00-12:30	Business Meeting
9:00 a.m.-12:00 noon Colleton Room	SC Chapter of the American Academy of Pediatrics Scientific Session
9:00-9:45	"Minimally Invasive Pediatric Surgery - What the Pediatrician Should (Must!) Know" Edward P. Tagge, MD, MUSC, Charleston, SC
9:45-9:55	Question and Answer Session
9:55-10:40	"The ABCs of Pediatric Endocrinology" Howard J. Heinze, MD, USC School of Medicine, Columbia, SC
10:40-10:50	Question and Answer Session
10:50-11:05	Break
11:05-11:50	"Functional Bowel Disease in Children" John T. Boyle, MD, Greenville Hospital System, Greenville, SC
11:50-12:00	Question and Answer Session
9:00 a.m.-12:00 noon Suite 2H	SCMA Occupational Medicine Committee Business Meeting and Scientific Session
9:00-10:00	Business Meeting
10:00-10:55	"What is Occupational Medicine" Andrew E. Floren, MD, Florence, SC
10:55-11:50	"Efficient Worker's Compensation Care" Andrew E. Floren, MD, Florence, SC
9:30 a.m.-11:00 a.m. Edmunds Room	SOCPAC Board Meeting
10:00 a.m.-11:30 a.m. Riley Room	SCIMER Board Meeting

Saturday, May 1, 1999 (cont.)

TIME/LOCATION	EVENT
10:00 a.m.-12:00 noon Suite 2G	SC Society of Pathologists Scientific Session "Surgical Pathology of Tumors of the Lung" Russell A. Harley, Jr., MD, MUSC, Charleston, SC
10:15 a.m.-11:15 a.m.	Coffee Break Booths 9 & 65
11:00 a.m.-12:30 p.m. Fenwick Room	SCMA Practice Management Services, Inc. Board Meeting
12:00 noon-1:15 p.m. Magnolia Ballroom	SC Dermatological Association Luncheon (SCDA Members Only) (Supported by Janssen Pharmaceutica)
6:30 p.m. - 7:00 p.m. Willow Ballroom	Presidential Inauguration Ceremony
7:00 p.m.-8:00 p.m. Magnolia/Live Oak Ballrooms	SCMA Presidents' Gala Reception (Supported by Carolina Physicians Advisory Service)

Sunday, May 2, 1999

7:00 a.m.-10:30 a.m. 2nd Floor Grand Hall	SCMA Registration Open
7:30 a.m.-8:30 a.m. Charleston Grill	SCMA Board of Trustees Breakfast
8:30 a.m.-12:30 p.m. Dogwood/Cypress and Live Oak Ballrooms	SCMA House of Delegates
12:30 p.m.-1:00 p.m. Colleton Room	SCMA Board of Trustees Reorganization Meeting

LEARNING OBJECTIVES FOR SCIENTIFIC SESSIONS

Under each session name is a listing of objectives that each attendee should be able to achieve at the end of the specific session.

"Current Screening Process for Colon Cancer"
- Discuss the prevalence of colon cancer in South Carolina.
- Identify average risk and high risk population for colorectal cancer.
- List the current recommended screening guidelines for colon cancer.

"Current Screening Process for Breast Cancer"
- Discuss the prevalence of breast cancer in South Carolina.
- List the current recommended screening guidelines for breast cancer.

"Preventing Cancer"
- List the three best-studied chemopreventive agents and their potential effects on cancer.
- Describe three simple cancer prevention behaviors.
- List specific interventions for cancers especially important to South Carolina.

"Medical Treatment of Congenital Heart Disease"
- Discuss the prevalence of congenital heart disease in South Carolina.
- List the diagnostic criteria for congenital heart disease.
- Outline the therapeutic options for congenital heart disease.

"Overview of Noninvasive Diagnosis of Peripheral Vascular Disease"
- List the most common symptoms of peripheral vascular disease that would lead to early diagnosis.

"Alternative Medicine"
- List the four major types of alternative medicine.
- Describe at least three specific alternative medicine treatments that have been shown to be useful in a modern scientific fashion.
- List at least three alternative medicine treatments that should be avoided and why.
- Outline guidelines to use when advising patients about herbal therapies and other methods of alternative medicine.

"Treating Hearing Impaired or Disabled Patients/ ADA Compliance"
- Discuss the community resources that are available to assist in the medical care of hearing impaired or disabled patients.

"Diagnostic Evaluation and Treatment of Depression"
- Recognize some of the characteristics of neuro images of depressed patients' brains.
- Discuss the treatment implications of these findings.

"Board of Medical Examiners—Protecting Your License and New Regulations"
- Identify any new regulatory modifications.
- Discuss the responsibility of the Board of Medical Examiners in regards to guaranteeing better patient care in South Carolina.
- Outline the new continuing medical education requirements for licensure in South Carolina.
- Describe the complaint process.
- Recognize areas of concern and be better prepared to protect his license.

"Current Concepts in the Treatment of Addictions"
- Discuss the latest recommendations for the treatment of substance dependence involving alcohol and at least two other drugs.
- List what treatment modalities can be effective in primary care settings, and which require referral for specialty care.

"Side Effects of Psychotropic Medications, Recognition and Management"
- Recognize and manage at least three prominent side effects likely to occur with commonly used psychotropic medication.

"Building a Continuum of Care for the 21st Century"
- Discuss ways to build new services from an existing cardiac rehabilitation program to meet the larger health care needs of the community.

"Non-Operative Management of Intermittent Claudication"
- Discuss the anatomy, physiology, and pathology of PVD.
- Outline the management of PVD patients with non-operative alternative treatments focusing on risk factor modification and progressive exercise.

"Reimbursement and Managed Care"
- Discuss strategies for reimbursement and coping with managed care issues for cardiopulmonary rehabilitation.

"The Art of Exercise Prescription"
- Outline an appropriate exercise prescription for patients (i.e. cardiac, diabetic, pulmonary) without an entry exercise test.

"How You Can Help Your Patient Stop Smoking"
- Describe a physician's role in a successful smoking cessation program.
- Discuss key components to a successful smoking cessation program.
- Outline how to help patients with special needs become quitters.

"Pulmonary Rehabilitation - A Few More Details..."

- Discuss the current and future trends in reimbursement with pulmonary rehabilitation programs in South Carolina and nationwide.
- Discuss the importance of collecting outcome data and list the current outcome tools being used for pulmonary rehabilitation.

"The Importance of Body as Barometer in Stress Management"

- Discuss the importance of the true bodily experience of peace and awareness in stress management as the foundation of improving adherence.

"Reimbursement and Medicare"

- Discuss strategies for reimbursement and coping with Medicare issues for cardiopulmonary rehabilitation.

"Type 2 Diabetes and Heart Disease - The Role of Weight Management and Exercise"

- Discuss the relationship of diabetes and associated metabolic abnormalities to coronary heart disease risk.
- Describe the effect of weight reduction and exercise on glycemic control.

SCMA Seminar: "New Drug Update"

- Describe the potential reasons for the significant increase in the number of new drug approvals (over 100 new drugs in the last two years).
- Compare and contrast the potential advantages, disadvantages, and clinical use of the newer agents to existing medications.
- Describe the appropriate use of selected new agents and their potential impact on therapeutic outcomes and cost effectiveness.
- Discuss the potential adverse effects, monitoring, and drug interactions of potential significance with the newer medications.

"The NICU—Lessons from the Past—Visions of the Future—How to Prepare for Change"

- Identify environmental concerns in the NICU.
- Apply planning issues and space use ratios to their home NICU.
- Discuss potential change for future NICU's.

SCMA Workshop: "The Four Most Statistically Important Health Problems in South Carolina"

- List the four most statistically important health problems in South Carolina.
- Discuss the negative and positive impact of the four health problems upon the populace.
- Outline preventive measures to use to lower the rate of these four health problems in South Carolina.

"Pain Management"

- Describe the most recent advances in pain management in relation to oncology patients.

"Vascular Surgeons of the '90s Dealing with Endovascular Surgery"

- List changes needed in his/her practice to become an effective vascular surgeon in the future.
- Outline ways he/she can become competent in endovascular surgery.

"Computers in Anesthesia"

- Discuss the current state of computers in medicine and specifically in the practice of anesthesia.
- Outline how computers can be used to enhance you anesthesia practice.
- Outline access to and use of internet resources for anesthesia.

"Fraud and Abuse in Medicine"

- Describe the current state of affairs in the government's attempt to reduce fraud and abuse in Medicare.

"How to Avoid Fraud and Abuse with Anesthesia Billing"

- Discuss compliance issues as they relate to anesthesia billing.
- Outline how to set up a compliance plan.

"Bispectral Analysis: Monitoring the Hypnotic Effects of Anesthetics"

- Describe the origins of the Bispectral Index Monitor.
- Discuss how the monitors work and how the index numbers relate to consciousness.
- Outline the benefits of using the Bispectral Index Monitor on different types of anesthetics.
- Explain the problems and pitfalls of using the Bispectral Index Monitor.

"Antibiotic Update and the Problem of Drug-Resistant Bacteria"

- Discuss the treatment of infections due to penicillin-G resistant pneumococci.
- Discuss the prevention and treatment of infections due to vancomycin-resistant enterococci.
- Outline the current approaches to limiting further spread of antibiotic-resistant microorganisms.

"Emerging Pathogens I. Bacteria and Rickettsia"

- List the presenting features of ehrlichiosis.
- Describe the current "problem pathogens" associated with bacterial diarrhea including E. coli 0157.
- Outline the current spectrum of organisms causing upper and lower respiratory tract infections.

"Emerging Pathogens II. Viruses"

- Outline the current approaches to diagnosis and treatment of hepatitis C.
- Discuss recent information about the prevention and management of diseases caused by hepatitis virus A, B, and C.
- Describe the current state of "emerging viruses" such as dengue fever virus.

"Antiretrovial Therapy: What's New?"
- Discuss the relative roles of the new protease inhibitors.
- Outline the current combinations available for treatment of antiretroviral-naïve patients.
- Describe the current approach to treatment of patients who have developed clinical resistance to one or more of the antiretroviral drugs.

"New Insights into Cholesterol Lowering and Risk Factor Reduction"
- Identify and discuss new issues in risk reduction of coronary artery disease.

"Pulmonary Rehabilitation: Efficient, Effective, and Economical Care"
- Discuss current methods of treatment, program components, and outcomes management in pulmonary rehabilitation.

"The Key to Excellence"
- List the relationship of at least three characteristics of Type A behavior pattern.
- List at least two stress challenges that are unique to today's families.
- List at least three specific things that can be done to keep intimacy alive in a busy life.
- Discuss at least two ways that men and women respond differently to the stresses of balancing work and family roles.

"What is Occupational Medicine"
- State where physicians may seek consultations for or may seek referrals for patients whose occupational medicine problems/needs exceed the level of expertise of the physician.
- List the components of the full practice of Occupational Medicine.
- List the characteristics unique to this medical specialty.

"Efficient Worker's Compensation Care"
- List the needs of companies regarding worker's compensation injuries.
- List the key functions of quality medical care and cost-containment in Occupational Medicine.

"Treatment of the Painful Facet Syndrome"
- Discuss the significant anatomical relationship about the facet.
- Recognize the advantage of partially denervating the painful facet.

"Selective Inhibition of Cyclooxygenase-2: Therapeutic Implications"
- Describe the metabolism of arachidonic acid and the pharmacology of its metabolites.
- Discuss the roles of fatty acid cyclooxygenase I and II in physiologic and pathophysiologic processes.
- Discuss the concept behind selective inhibition of cyclooxygenase II (COX II) for therapeutic purposes.

"Minimally Invasive Pediatric Surgery—What the Pediatrician Should (Must!) Know"
- Describe technique of minimally invasive surgery.
- Compare effect (post-op pain, scar appearance, return to normal activity) of open versus laparoscopic access to the abdomen and chest in children.
- Discuss the role of minimally invasive surgery in everyday pediatric problems: inguinal hernia, undescended testicle, and appendicitis.
- Describe the role of minimally invasive surgery in unusual pediatric problems: Hirschsprung's, pediatric solid tumors, pectus abnormalities.

"The ABCs of Pediatric Endocrinology"
- Discuss a variety of common endocrine disorders in childhood and adolescence.
- Describe how to reassure families and treat young people with a variety of common endocrine disorders.

"Functional Bowel Disease in Children"
- Recognize presentations of functional bowel disease in children.
- Discuss current thought regarding pathophysiology of functional bowel disease.
- Outline strategies for diagnosis and management of functional bowel disease.

"Surgical Pathology of Tumors of the Lung"
- Discuss the difference between typical versus atypical carcinoid tumors of lung.
- Discuss the gross, radiologic, histologic and cytologic, and clinical differences among bronchioloalveolar carcinomas and their close relatives.
- Diagnose eight out of ten rare tumors of the lung.

The SCMA reserves the right to modify speakers, topics, and learning objectives as needed. The SCMA designates this continuing medical education activity for up to 11.75 hours of Category 1 credit towards the Physician's Recognition Award of the American Medical Association. Each physician should claim only those hours of credit he or she actually spent in the educational activity. The SCMA is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians. This program has been reviewed and is acceptable for 11.75 prescribed hours by the American Academy of Family Physicians. The SCMA adheres to the ACCME standards regarding industry support of CME in disclosure of faculty and commercial support relationships. This information will be contained in the final program and reported at each session. Tthe 1999 Scientific Assembly was designed for the membership of SCMA which is composed of South Carolina physicians from all specialties.

1999 DELEGATES AND ALTERNATES

• ABBEVILLE
Lisa Maria Perino MD

• AIKEN
Richard S Chesser MD
Wayne G. Entrekin MD
Wayne Thomas Frei MD
William Andrew Jackson MD
James D Quarles Jr MD
Timothy J Shannon MD
Alternate Delegate
Jonathan C Collins MD

• ANDERSON
Thomas Pressley Crocker MD
George M McDaniel MD
Marshall Leroy Meadors III MD
Harold G Morse MD
Jerry R Powell MD
Michael Lee Tillirson DO

• BEAUFORT
Richard Edwin Akers II MD
Paul Mazzeo MD
Baxter F McLendon III MD
Ralph Erskine Moore III MD
H Timberlake Pearce Jr MD
Gregory A Slachta MD
Douglas John Thompson MD
Alternate Delegates
Robert Edward Bell MD
Michael D Coffey MD
Scott D Condie MD
Hector F Esquivel MD
Thor Robert Rhodin MD
Leland C Stoddard Jr MD
Gary Allen Thompson MD
Claudia Y Venable MD

• CHARLESTON
Warren Y Adkins MD
Lawrence B Afrin MD
Charles A Andrus MD
Thomas Corbett Appleby MD
Mary E Baker MD
Paul L Baron MD
James Alan Boylston MD
Carroll S Brown MD
Elizabeth Burges MD
Kimberly A Collins MD
Joanne M Conroy MD
John P Davis Jr MD
Jeffery J Dorociak MD
Lydia A Engelhardt MD
C Thomas Fitts MD
Robert W Fitts MD
John E Franklin MD
Waddell H Gilmore III MD
Philip Lane Goolsby MD
John M Graham Jr MD
Richard Henry Gross MD
David Michael Habib MD
Barry L Hainer MD
Russell A Harley MD
Robert Marshall Hay MD
Gene Reid Howard MD
D Michael Hull MD
Donald R Johnson II MD
Patrick Joseph Kelly MD
William H Lee III MD
Clarence W Legerton III MD
Irwin G Linton Jr MD
General T Little MD
Kathleen Ruth Malaney MD
Stephen A McLeod-Bryant MD
Daniel E Mengedoht MD
Marjorie M Mengedoht MD
Edward Chisholm Morrison MD
Baird D Oldfield MD
Rex Gayle Quigley MD
William M Rambo Sr MD
Allan A Rashford MD
Stephen E Rawe MD
Samuel H Rosen MD
Rudolph Byrd Rustin III MD
Eugene D Rutland Jr MD
Graham C Scott MD
Steven Dennis Shapiro MD
Ralph M Shealy MD
Richard M Silver MD
James D Spearman MD
Robert M Steinberg MD
William H Stroud Jr MD
Susan Stoll B Tate MD
Frederick W Tecklenburg MD
Mike O Tyler MD
Henry Cowardin West MD
George F Worsham MD
Ernest L Zinkowski MD
Alternate Delegates
Angus S Baker Jr MD
James G Baldwin Jr MD
Lisa Ann Baron MD
Ettaleah C Bluestein MD
Alton G Brown Jr MD
Chris Yvette Brunson MD
Robert William Cain MD
Peter J Carek MD
Deanna Ellington Cheek MD
Sandra E Conradi MD
Brian G Cuddy MD
Paul M Deaton Jr MD
George B Delporto MD
Kenneth A Dodds MD
James Al Glenn MD
Leonie Gordon MD
Rayna Kneuper Hall MD
Marta Toruno Hampton MD
Ronald P Hargrave MD
Roy A Howell Jr MD
Thomas Sanders Hughes MD
George Hasham Khoury MD
Jeffrey John Kline MD
Howard M Kurtzman MD
Pearon G Lang MD
Christine Patricia Lloyd MD
William H Marsh MD
Mary Kathryn Menard MD
K Scott Miller MD
Lonzetta Neal MD
David George O'Day MD
Sunil Jayavant Patel MD
Sandra Lynn Powell MD
Thomas G Quattlebaum MD
Laurence H Raney MD
Adrian Reuben MD
John W Ringwood MD
Georgia Carlisle Roane MD
H Del Schutte Jr MD
Valerie A Scott MD
Stephanie E Smith-Phillips MD
Steven James Taylor MD
Karen Ullian MD

• CHEROKEE
Jay Hammett Sr MD

• CHESTER
Samuel R Stone MD
Alternate Delegate
Rhett H Hasell MD

• COLLETON
J Frank Biggers III MD
Andrew F Calcutt MD
Alternate Delegate
Winslow P Engel MD

• DILLON
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OFFICER REPORTS

REPORT OF THE PRESIDENT

I know now what my predecessors meant when they spoke of the year going by far too fast. This year has gone by rapidly indeed.

Unlike last year with our very public 150th anniversary celebration and our involvement in several public issues, this year has been one of steady progress behind the scenes. The important work of your association has continued forward. Each division of our organization continues to expand and succeed. Members of the SCMA staff continue to influence the legislature, to improve our practice environment, and to improve the skills of our medical office staff and organizations—the SCMA workshops have been very popular with our medical office staff.

The committees stay active and involved; we have encouraged attendance this year with positive results. Several committees have new chairmen and I thank each of them for their hard work. Several committees are in transition as our environment and culture change; I thank these committees for their patience and perseverance. I want to thank our staff who assists these committees and I wish to thank our Vice Presidents for their hard work and dedication in their specific areas.

The Chairman and I have put together several task forces and ad hoc committees that continue to show promise. The report of the JUA/PCF Task Force is now under review. The report contains several important recommendations that strengthen our current malpractice system and help to provide us with the best legal defense strategies and defense attorneys available.

The Board of Trustees has approved our long-range plan and our task forces and committees are studying several of the plan's suggestions. We have already created the new position of Chief Operating Officer and after a careful nationwide search, have hired Ron Fitzwater. Ron comes to us from a large county/city medical society in Ohio. He has insurance experience, charitable foundation experience, and medical society management experience. He is busy learning about our organization and assuming his new responsibilities. If you have not already, I hope you will have a chance to meet with him at the Annual Meeting and welcome him to South Carolina.

Bill Mahon and I have met with many of the county medical societies across South Carolina. Our message has been about organized medicine membership and the AMA, in particular. As Bill Mahon is fond of saying, "Six years after the demise of the AMA, the specialties will come back together to design a new AMA." The House of Medicine needs an organized voice in Washington, D.C. and across the nation and I hope you will support the AMA with your membership dollars. The AMA has proven they provide benefits for your dues dollar—beating back the Medicare dollar service fee per claim is only one example of how the AMA has worked for its members. For most of us, these fees would be more than AMA annual dues.

We have also talked about managed care issues; in particular, the salaries of the managed care organization executives. From a variety of public sources, Bill Mahon has collected impressive data showing how these executives bring new meaning to the phrase "managed care" with premium dollars that used to go to doctors and hospitals.

I want to thank all of you for the hospitality that has been extended to me during my term; I appreciate all the new friendships I have made around the state.

I have been proud to represent you in Georgia, North Carolina, and at the AMA. What you have heard from others is absolutely true—our small society is well respected and viewed as a leader throughout the country. On another note, I was impressed with the new format of our presidential inauguration that Dr. Weston borrowed from North Carolina; it brought "a touch of class" to our weekend and I hope it continues.

By now, it is probably clear to all that I have followed a deliberate line with my President's Pages in *The Journal.* Yes, there are problems in the current practice of medicine and yes, many physicians are discouraged, depressed, or just plan fed-up with the new bureaucracy and second-guessing of clinical decisions. On the other hand, the practice of medicine remains a noble profession, a caring profession, a scientific profession, and an exciting profession. So, continue on. Each one of you can help lead us to a better future. I am counting on you. Once again, I thank you for your help.

Finally, I want to thank the staff that helped me so much over this last year. We have great folks working with us at the SCMA and I thank each and every one of them for what they have done for me—and for you—this year.

I would like to extend a sincere welcome to my successor, Bill Hester. Thank you all for the chance to serve.

Stephen A. Imbeau, MD
President

REPORT OF THE TREASURER

As I complete my second year as treasurer of the South Carolina Medical Association (SCMA), I would like to present a short report about the SCMA's financial condition. A more comprehensive report will be presented to the 1999 House of Delegates in Charleston.

For the year ending June 30, 1998, the SCMA had net revenue over expenses of $118,158 including depreciation expense of $71,441. Adjusting for depreciation, we showed a cash increase from operations of $189,599. The SCMA had a fund balance of $2,648,378 as of June 30, 1998.

The SCMA's current financial condition for the seven months ending January 1998, projects a positive financial position. At the end of January 1999, the SCMA had revenue over expenses of $72,343.

The investment policies of the SCMA and its affiliates have continued in a similar manner to past years, with diversified investments in federal treasury and agency notes and money market funds.

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We have historically operated on a sound financial basis and should continue to do so.

For the fiscal year ending June 1999, we project a surplus of revenue over expenses.

I thank the membership for the privilege of serving as your treasurer for the past two years.

J. Capers Hiott, MD
Treasurer

THE CHAIRMAN OF THE BOARD

The South Carolina Medical Association (SCMA) Board of Trustees is a busy and vital part of our state organization. During the past year, the full board met six times and the executive committee met five times. During a typical board meeting, our trustees consider reports from the President, President-elect, Secretary, Treasurer, Chairman of the Board, Speaker of the House of Delegates, each of the Medical District Trustees, and the Chief Executive Officer. Reports from the SCMA staff include Financial Services, Inc., Practice Management Services, Inc., Physicians Care Network, SCMA Foundation, SOCPAC, and others. Your Board of Trustees is frequently addressed by special guests such as representatives of the JUA, PCF, Medicare, DHEC and others. Your trustees carefully weigh all matters brought before them and every effort is made to insure that the leadership of the SCMA speaks for South Carolina physicians and their interests.

As Chairman of the Board, I have established four task forces/committees in the past year. The Membership Task Force is concerned with statewide issues of membership and representation through the component medical societies and county medical societies of the organization. This task force was appointed in response to resolution H-3 of the 1997 SCMA House of Delegates as amended. This task force will work toward implementation of an SCMA membership structure that will ensure adequate and fair representation in the 21st century.

The Managed Care Task Force was appointed in response to 1997 resolution F-8, F-10, F-11, and F-12 and 1998 resolution F-9 and F-12. As a result, the task force has multiple responsibilities for dealing with managed care issues on a statewide basis. Some of the issues now being discussed by that group include development of a revised and updated guide to managed care contracts and a summary of same, credentialing issues, and a standardized referral form. This committee is only just getting started with its work and would welcome the input of the membership. The committee also desires to add additional members. Please let me know if you would like to serve.

The Ad Hoc Medical-Legal Committee was appointed to deal with issues relating to interprofessional guidelines for attorneys and physicians. There is a set of guidelines developed by the legal community that have raised multiple objections from physicians. This committee has been charged with finding common ground and attempting to resolve these difficulties.

The JUA/PCF Task Force began its work shortly after the 1998 Annual Meeting and completed its report in early January 1999. The task force recommendations have been sent to the JUA and PCF boards and management for their consideration. South Carolina physicians continue to enjoy the best malpractice insurance rates in the nation with an excellent record of malpractice defense victories. It is the desire of myself and Board of Trustees that the malpractice climate remain financially healthy.

The leadership of the Columbia Medical Society has pointed the way toward dealing with issues concerning prompt payment of insurance claims and with coding problems. A brainstorming session comprised of the SCMA leadership and the Columbia Medical Society leadership has resulted in a strategy for examining these issues in detail with the ultimate goals of improving claims payment turnaround time and eliminating downcoding. The SCMA has previewed a software program which allows medical practices to audit their insurance claims experience and may be able to furnish this program on a trial basis to selected members in the near future for further evaluation.

The SCMA will be contracting with the Elliott, Davis, LLP & Co. accounting firm to conduct a statistically valid audit of a representative cross-section of medical practices across the state. The claims payment and coding information obtained will allow your leadership to address these issues with payors. Either an existing SCMA committee (such as the Managed Care Committee) or a new committee will be appointed to develop ongoing policy and to investigate members' claims payment problems. An SCMA staff person will be assigned or hired to function as a physician advocate or ombudsman for the purpose of handling these problems on a day to day basis. This person will develop an ongoing dialog with the Insurance Commission and the various insurance companies and third party administrators (TPAs) around the state in order to facilitate a resolution to disputed and delayed claims. This strategy should result in improvements in claims payment for SCMA members. It is anticipated that within the next year, our experience with these efforts will determine whether or not further action such as legislative initiative will be necessary to accomplish the membership demand for timely payment of clean claims and resolutions of coding problems, particularly downcoding. Physicians desiring to serve on this committee should contact me.

Your Board of Trustees carefully followed the legislative agenda for the past year and once again, I am pleased to report that the SCMA enjoys excellent relationships in the General Assembly. Your SCMA lobbyists and leadership provide timely and valuable input into the legislative process. The Interspecialty Council, which is composed of representatives from each of the medical specialty societies in the state, meets frequently during the legislative season and examines carefully all of the legislative issues and bills that concern the medical profession. This process insures broad based input and carefully thought out positions on all legislative issues of interest to the membership. As chairman, I have been fortunate to attend most of those meetings and can testify to the hard work that goes on.

Other issues dealt with by your board in the past year include E & M guidelines, potential anti-trust violations by some healthcare organizations in the state, medical board licensure issues including out-of-state HMO medical directors, JCAHO sentinel events issues, and CPT code issues.

Your SCMA Board of Trustees continues to strongly support medical student, resident physician, and young physician membership and participation in the SCMA. I personally ask that all SCMA members strongly encourage non-member physicians to join our organization. There is strength in numbers.

I participated in a two hour ETV managed-care broadcast on June 30, 1998. Two editorials were written by me and published in the SCMA *Journal* in 1998, and I was interviewed for a series of articles, which appeared in the *South Carolina Healthcare Buyers' Magazine* and several sister publications.

I see a busy agenda ahead for the SCMA. Many of the national healthcare issues effect South Carolina physicians as well. These include managed care reform and oversight, anti-trust relief, fraud and abuse issues, Medicare reform, patient confidentiality issues, regularity relief, in particular, a reasonable revision of the E&M guidelines. The criminalization of physicians for simple coding errors must be stopped. The "all products" clause of managed care organizations must be opposed and all such organizations must promise to pay legitimate healthcare claims promptly.

It has been a pleasure and a challenge to serve as your Chairman of the Board for the past year. It is my intention to seek the chairmanship for a second year and I ask the support of my fellow trustees and House of Delegate members in that endeavor.

R. Duren Johnson, Jr., MD
Chairman of the Board

TRUSTEE, FIRST MEDICAL DISTRICT

It has been a pleasure serving as trustee for the rural First Medical District. We have seen changes in the district, which seem to have been common across the state. Consolidation of medical practices, the business of medicine, competition among medical businesses and defections from those businesses has been the center of attention.

It seemed that Hilton Head Hospital and Beaufort Memorial Hospital would finally be able to cooperate in a joint project at the Bluffton-Okatie Outpatient Center. However, the negotiations have been lengthy and are still in progress.

Lowcountry General Hospital remains in Ridgeland, as the proposed move to Highway 278, near Hardeeville, has been put on hold. A new outpatient/urgent care center is in the works in Ridgeland.

The Harrison Peeples Clinic in Hampton has left the hospital facility for a building of its own across the highway. The renovation of the operating room at Hampton General Hospital is complete and in use.

Roper and Columbia Colleton Hospitals have completed their joint Ambulatory Surgery Center project. In all areas of the district, the number of physicians continues to increase at an unprecedented pace.

None of the medical societies in the district have been particularly active. My goal continues to be to increase physician and spouse involvement at the county society level. I hope that you will all assist me in that goal. Thank you for allowing me to serve.

Oswald L. Mikell, MD
Trustee, First Medical District

TRUSTEE, FIRST MEDICAL DISTRICT (METROPOLITAN)

This has been an exciting year for both patients and providers in the Charleston community. New alliances and facilities have emerged, offering improved access to care along with a cost-contained approach to the delivery of medical services. A year for "firsts" occurred, reflecting the need for the House of Medicine to be all inclusive, united in one voice, with attention to preparing future leaders in organized medicine. These have been accomplished with the underlying theme of "do what is best for the patient."

In July 1998, CareAlliance Health Services was formed, merging the community's two largest not-for-profit corporations, Roper CareAlliance and Bon Secours-St. Francis Hospital, with Carolinas HealthCare System of Charlotte. With its combined workforce of greater than 4,000, the alliance represents a significant entity in the delivery of healthcare in the Lowcountry. MUSC also enjoyed success this year with the opening of the new Rutledge Tower facility. This facility provides expanded quarters for the ambulatory clinics of MUSC, and anticipates 265,000 patient visits and 6,000 surgeries performed there in the first year. In January 1999, the Trident Health System announced plans for a 28 million-dollar building and expansion project for their North Charleston facility. Collectively, an impressive year for everyone.

The year provided for a notable list of "firsts:" Dr. Allan Rashford, became the first African American President of the Charleston County Medical Society (CCMS); Dr. Joanne Conroy, became the first female to chair a clinical department at MUSC, the Department of Anesthesiology; the first public forum was held to discuss "Patients' Rights Within Managed Care Organizations;" and the first SCMA/ CCMS cosponsored party was held for the entire MUSC freshmen medical student class.

The Charleston County Medical Society provided an interesting array of programs to its members, including the facilitation of a lively discussion between the coroner's office and the medical examiner, an excellent address by the "creator" of aerobic exercise, and another successful legislative reception. We continued our service to the community, via the popular free sports physicals for area high school students, through participation in free medical clinics at Crisis Ministries, and participation in Dr.Bart Barone's COMMUN-I-CARE program. We have a wonderful Charleston County Medical Society Auxiliary (celebrating its 75th anniversary this year!), that has raised and distributed over $20,000 to the healthcare needs of the community. We are fortunate to have a superb Executive Director of the CCMS, Ms. Kaye Wallen. She truly facilitates the successes of our county organizations.

Other noteworthy items for this district include: the announcement of the retirement of Dr. Jim Edwards as President of MUSC at years' end; the election of Dr. Tom Fitts as the next President of CCMS; and affiliation remain in abeyance for MUSC. I am pleased to say that I sense improvement in "Town/Gown" relations, as those differences have clearly been absent in the past years' activities of the CCMS. There is little doubt that our patients and community will reap the benefits of this cooperation.

Clearly, the emphasis of this past year has been to open our arms, include everyone, and provide leadership opportunities for everyone. Simultaneously, the "Old Guard" has recognized the need to have young physicians at the table to help direct our futures. The blend of specialties and age groups within the SCMA Board of Trustees highlights this point. I appreciate the opportunity to have served in this role as Trustee, and I look forward to continued service to this organization and our community.

Patrick J. Kelly, MD
Trustee, First Medical District
(Metropolitan)

TRUSTEE, SECOND MEDICAL DISTRICT (METROPOLITAN)

I have been fortunate to represent the Second District (Metropolitan) to the SCMA. In so doing, it is with pride that I report on the activities of the Columbia Medical Society over the past year.

We have the capable leadership of Dr. Vince Degenhart during the course of 1998 and Dr. Robert Malanuk follows him in 1999. Dr. Degenhart was instrumental in evaluating the prompt payment situation and third party payors. This has resulted in the SCMA establishing a task force to appraise methods of dealing with this issue and has resulted in the establishment of an ombudsman on the SCMA staff to whom physicians can refer.

The mini-internship program was presented in May and November with participation by many of the community leaders working with a number of the Columbia Medical Society members over a two-day period. The summary evaluation by the participants was very positive in that it allows our medical community to interface and communicate with our business, religious, and professional leaders.

In conjunction with the Medical Society Auxiliary, six scholarships have been awarded to students at the University of South Carolina School of Medicine. The society has served as judge for the Basic Medical Science category of the Annual Central South Carolina Region II Science and Engineering Fair at the University of South Carolina. We have awarded prizes in two categories.

The Executive Committee continued the annual luncheon, which the *State* paper hosted this past year. Maintaining a give and take relationship with the media allows us to emphasize the handling importance of medical news.

The Young Physicians' Section sponsored a reception /party for new physicians in the area to meet and to learn about organized medicine. The society also hosted a Legislative Reception for the Richland County Legislative Delegation in November of this past year.

Finally, the society sponsored seven scientific meetings for CME credit over the past year as well as three meetings of business interest with topics pertinent to the practice of medicine now and in the future.

The Columbia Medical Society continues to take a positive position on the local/regional level representing physicians in the Midlands area of South Carolina.

Gerald A. Wilson, MD
Trustee, Second Medical District
(Metropolitan)

TRUSTEE, THIRD MEDICAL DISTRICT

The Third Medical District of South Carolina is composed of five counties consisting of Abbeville, Greenwood, Laurens, McCormick and Newberry.

Clearly, our health care providers have realized their strength as the best to judge and provide the health care needs of the Third Medical District. Outside managed care enterprises have failed to fractionate our health care community. The formal alliance of Laurens Care and Upper Savannah Health Services into the greater Carolinas Health Care PHO provided further evidence of our diligence, in providing quality care to those within the district. This confidence in our future is also seen as Self Memorial Hospital continues to maintain health care excellence for our communities by expanding services with a planned Cardiac Surgery Program and an Outpatient Surgery Center joint venture with area physicians.

This report will finish by honoring the memory of our medical colleagues lost this year. We will particularly miss the contributions of Brooks Scurry, MD.

John Funke, III, MD
Trustee, Third Medical District

TRUSTEE, FOURTH MEDICAL DISTRICT (METROPOLITAN)

Under the leadership of Bruce A. Synder, MD, and Jeffery G. Lawson, MD, the Greenville County Medical Society is making every attempt to meet new opportunities and challenges within our medical community. The Community Planning Counsel of Greenville County commissioned a study by HealthCare Concept, Inc. and Performance Marketing Research for an extensive Health Assessment Survey of Greenville county. Our society is actively involved in both the Medical Transportation and Access to Medical Care Task Forces. This work is being addressed by our Health Care Services Committee as well. There are a number of medically underserved individuals whose access to health care must be improved by simple measures such as modifying office hours and more difficult measures such as challenging our county government to improve public transportation for health access.

Two structural changes have happened in the upstate medical community. The dismantling of Carolina Multi-Specialty Associates, PA, has forced many physicians to be reorganized into individual private practices without a corporate umbrella. St. Francis' Health System and its sister hospitals are up for sale and the management is seeking another Catholic organization to assume ownership of the groups. The effects of these changes will be felt in the coming months.

Our membership has enjoyed growth and our members continue to be involved. We appreciate the statewide leadership of James B. Page, MD, Chair of the South Carolina Political Action Committee (SOCPAC) and Charles R. Duncan, Jr., MD, Chair of the SCMA Medical Ethics Committee. The entire membership had the opportunity to hear Richard F. Corlin, MD, Speaker of the AMA House of Delegates, at our September meeting. The society has made an effort to reach out to different segments of our membership by establishing a Young Physician Section and an Emeritus Forum. The society has organized specific functions for these groups to encourage their continued involvement such as columns within our newsletter, *The Bulletin*. This year, two of our emeritus members, George Mackey Grimball, MD, and Dwight H. Smith, MD received the Order of the Palmetto. Lawson W. Stoneburner, MD, received the 1998 SCMA Physician Award for his continued leadership of the Greenville Free Medical Clinic.

The society had a successful mini-internship program in September. Due to interest and scheduling, there will be two mini-internship programs in 1999. The Red Ribbon celebration continues to grow in Greenville. In October, over 3,000 children participated in the second annual Red Ribbon parade. Our society has been involved in this parade from the beginning and we sponsor school awards for Red Ribbon contest winners as well.

The membership has elected to establish an annual Greenville County Medical Society Scholarship in the amount of $3,000. This scholarship will be awarded through the SCMA Foundation to a medical student from Greenville County attending one of the medical schools in South Carolina. Starting this year, the society will send our president-elect to the AMA National Leadership Conference in preparation for their year as president. Our fiscal year has been changed to a calendar year as well, and annual terms will now start on a calendar basis. Our staff, Robin Scott-Blackburn and Joan Crick, serve our members efficiently and well.

I want to express my appreciation to the members of the Greenville County Medical Society for the privilege of serving as their trustee. The growth and dedication of this society gives me a sense of pride in our medical community and, specifically, in the members of the society.

John P. Evans, MD
Trustee, Fourth Medical District
(Metropolitan)

TRUSTEE, FIFTH DISTRICT

The physicians' healthcare agenda for 1998 and 1999 has been dominated by managed care issues, fraud and abuse issues, and E & M guidelines. The past year has seen the start of Medicare Part C, now known as Medicare + Choice. However, that program has experienced widespread defections as federal regulators have failed to follow through with adequate payments for participating physicians and organizations while at the same time issuing onerous regulations. Perhaps, Congress and the federal healthcare establishment are out of step with the public thought process. Sixty-six percent of the public thinks that Medicare either has no problems or has minor problems. Fifty percent of Americans believe that enrolling seniors in managed care plans would make it harder for them to see specialists when they are sick, and twenty six percent believe that managed care would decrease their healthcare quality. In spite of these warning signs, private sector managed care continues to grow at a brisk rate and Aetna made a bid to become the largest healthcare insurer in the United States with its proposed merger with Prudential Healthcare. Interestingly, shortly thereafter, Aetna lost a $120 million liability suit in California, and Humana lost a similar $13.1 million malpractice suit in Kentucky. In both cases, juries decided that the managed care companies systematically denied necessary treatment in order to save money. Perhaps it is true that "the bigger they are the harder they fall."

To no one's surprise and after years of brain dead financial management (slashing reimbursements, chronic delays in payment, and arbitrary claims denials), the HMO/managed healthcare system has squeezed out all of the financial fat out of the system (transferring that wealth to investor, CEO, and management) and is now experiencing the largest premium increases in a decade.

Physicians continue to see abundant problems with managed care including loss of autonomy, increased government intervention and regulation, declining income, skyrocketing paperwork requirements, growing malpractice exposure, and continued erosion of public trust and confidence in physicians. A recent survey of patients revealed that more fee for service indemnity patients (94 percent) completely or for the most part, trust their physicians to put their health and well-being above keeping down the health plan's costs as compared to physicians on salary (77 percent), capitated (83 percent) or fee for service managed care patients (85 percent). Again our patients have weighed in with their clear signal that PHYSICIANS ARE PATIENT ADVOCATES. Insurance companies and managed care institutions are not patient advocates as evidenced by their conduct and by the fact that less than one-half of US plans allow National Committee for Quality Assurance (NCQA) to publicly release data on their performance.

A vacuum is developing in the healthcare system; patients do not know whom to trust and they do not know where to obtain quality healthcare. Many patients are turning away from allopathic medicine and turning toward alternative forms of medical care. The dispensing of quality healthcare in an atmosphere of trust, competence, and confidentiality is the role for which physicians were trained. Now is our time to seize the day!

In a different vein, the past year in the fifth medical district, which is comprised of Chester, Fairfield, Kershaw, Lancaster, and York counties, has been a relatively quiet one. The Chester County Hospital has undergone a significant change in management and has appointed a new hospital administrator. The hospital had been plagued for some time by management problems and financial difficulties. New physicians are moving into Chester County. Piedmont Medical Center in Rock Hill has also appointed a new hospital administrator. In York and Lancaster counties, intense competition from the Charlotte healthcare market and its booming economy continues to be a major force in the local healthcare industry.

It has been a pleasure to serve as the Fifth District Trustee for the past year. I was fortunate enough to be elected Chairman of the Board of Trustees of the SCMA and have found that a challenging job. I have been fortunate enough to be a fifth district trustee since 1992. This year I will be running for my fourth and last term as trustee. I am also running for the position of Alternate Delegate to the AMA. I ask for the support of not only the membership of the fifth district delegation but also the SCMA House of Delegates.

Again, it has been a pleasure to serve you and the SCMA and I thank you for your continued support.

R. Duren Johnson, Jr., MD
Trustee, Fifth Medical District

TRUSTEE, SIXTH DISTRICT

A number of activities have occurred throughout the sixth medical district that are directly or indirectly related to health care reform.

Within the hospital community, all three hospitals in Horry County—Conway Hospital, Grand Strand Regional Medical Center, and Loris Hospital—are involved in the development of outpatient surgery centers in both the northern and southern coastal areas. Certificate of Need discussions are in process.

In an innovative effort, Grand Strand Regional Medical Center and Conway Hospital have elected to "joint venture" a Community South Strand Outpatient Surgery and Ambulatory Center. This initiative will include cooperative efforts by both medical staffs.

Paralleling the evolution in hospital services, a great deal of discussion occurred among the physicians throughout the sixth medical district. In Horry County, the medical staffs at Conway Hospital and Grand Strand Regional Medical Center are developing independent practice associations (IPAs) to address the needs of their service areas.

The Horry County Medical Society continues to be active and experienced growing meeting attendance in 1998. The society elected to continue to fund its own professional education programs in order to promote more diverse clinical and practice management topics.

The sixth medical district remains largely an indemnity payment environment. Within the commercial sector, second generation physician preferred organization (PPO) products are being introduced. There has been no growth in global capitated payors within Horry County.

The consequences of healthcare reform have been experienced throughout the sixth medical district. The physicians within the sixth medical district continue to be committed to addressing the challenges of healthcare reform in a manner that will maintain the quality of care to the patients we serve.

Kenneth L. DeHart, MD
Trustee, Sixth Medical District

TRUSTEE, SEVENTH MEDICAL DISTRICT

The Seventh Medical District consists of Williamsburg, Georgetown, Sumter, Clarendon, and Lee counties. This essentially rural district continues to have areas of growth which have significantly influenced health care systems. This new growth has resulted in increasing numbers of physicians in the larger counties as well. Georgetown numbers almost 100 physicians in the county while the tri-counties of Sumter-Clarendon-Lee indicate almost 150 licensed physicians in the three counties.

The words I hear most often when attending meetings of the county medical organizations involve HCFA, the health insurance industry, hospital changes and more recently, malpractice insurance, particularly JUA-PCF.

The comments about HCFA center on the recurring hassle of CPT codes and E&M (evaluation and management) documentation. These comments—complaints, actually—carry over to the problems of laboratory and ancillary testing requests by physicians dealing with Medicare and with private insurance carriers. As many primary care physicians have known for some time and as many physicians that are more specialized are discovering, screening multi-organ test profiles can no longer be ordered very simply. This places physicians in untenable positions and many physicians feel patients risk delay in diagnosis of potentially serious conditions. I expect we will see some resolutions about these topics at the Annual Meeting.

Health insurance providers are another common topic of physician comments; many doctors feel that third party payments are unnecessarily and at times, inappropriately slow. Meaningful, reproducible statistics on these situations are difficult to obtain, however.

Hospitals continue positioning themselves for market penetration, and physician groups such as IPAs and IPOs are negotiating with some in the district. The frequency and magnitude of malpractice judgments against physicians in our state has made us aware of the need for incessant vigilance toward quality care and risk management. Expect more on this at the Annual Meeting.

Two topics that always seem necessary to be emphasized are membership in organized medicine (meaning the AMA and SOCPAC.) I personally feel that the AMA leadership is becoming more and more aware of and responsive to physician membership input, and I know that doctors earnestly need the input of organized medicine to impact legislative oversight of the health care system. AMA and SOCPAC membership provide the most bang for the buck; our numbers should approach 100 percent here in South Carolina given our history of activism in our beliefs.

It has been a privilege to serve on the Board of the SCMA for the past two years, and I am grateful to the members of the Seventh Medical District for that opportunity. I look forward to future years with enthusiasm and confidence in the medical profession.

Gerald E. Harmon, MD
Trustee, Seventh Medical District

TRUSTEE, NINTH DISTRICT

It is a pleasure to present the status of our ninth district to South Carolina physicians for 1999. Membership this year remains strong with over seventy five percent physician participation among those active practitioners of Cherokee, Spartanburg, and Union counties. The district remains financially sound with no increase in dues and no extended debt. As new physicians join the medical community, many have elected to participate in organized medicine largely on the reputation of our state organization that truly acts on the behalf of South Carolina citizens and physicians who care for them. Maintaining low malpractice fees and providing for an effective lobby are two very successful efforts promoted by our SCMA. Combined with other services specializing in improving practice performance, the SCMA remains a leader as an advocate for all South Carolina physicians no matter what their affiliation.

As successful as our organization has become, some have begun to take these services for granted. As physician's obligations with other professional organizations and practice entities increase, there seems to be less time or interest to devote to the effort needed to preserve an effective voice in organized medicine, as evidenced by declining participation in local functions. The SCMA leadership must become more creative in its effort to attract interested physicians to the table for the purpose of maintaining a collegial relationship, promoting communication, and an exchange of ideas among the many disciplines within medicine. With all the various distractions affecting our professional lives, the SCMA can be the common force that will help keep physicians available. Each physician should regard membership in his/her local and state organization as an obligation, and to actively participate and support its functions for the good of those it serves.

As we enter the new millennium, it is my hope that physicians of Cherokee and Union counties will unite to create active societies. Maintaining active local organizations helps to foster physician interest in local affairs. Local membership in a larger organization opens its members to benefits not available to individuals outside the association. With the assistance of the SCMA staff, our goal will be to encourage other county physicians to become more active in our district affairs.

Timothy S. Llewelyn, MD
Trustee, Ninth Medical District

REPORT OF THE YOUNG PHYSICIANS SECTION

This year will mark the end of the first term of the Young Physician Trustee on the South Carolina Medical Association Board of Trustees. The AMA developed the Young Physician Section (YPS) in 1987 to help develop physician leadership in organized medicine. Several states have a seat on their respective board of trustees for young physicians. In 1996, a resolution was adopted to change the bylaws to add a young physician member to the SCMA Board of Trustees. I have had the great honor to serve as that board member.

The Young Physician Section has been involved in recruiting residents and students to the medical association and I have had the opportunity to speak with the residents and students at the USC School of Medicine and Palmetto Richland Memorial Hospital. Representatives from the section have also been visible members at the AMA Young Physician Section meetings. Dr. Jim Mock has been very involved and recently ran for a seat on the AMA YPS Governing Council.

At the YPS Annual Meeting, held prior to the SCMA Annual Meeting, the following officers were elected: Chair, Dr. "Andy" Pate; Chair-Elect, Dr. Eric Senn; Secretary-Treasurer, Dr. "Bert" Parker; Members-at-Large, Dr. Helen Lathem and Dr. Gregory Risk; SCMA and AMA Delegate, Dr. Jim Mock, and SCMA and AMA Alternate Delegate, Dr. March Seabrook.

The group also held its Interim Meeting on November 12, 1998 to discuss any pertinent business to be brought before the House of Delegates.

As I conclude my term on the Board of Trustees, I would like to express my gratitude to the young physicians of the state as well as the current board members. It has been both an honor and privilege to serve on this board.

March E. Seabrook, MD
Trustee, Young Physicians Section

THE SCMA DELEGATION TO THE AMA

This year, it is my privilege to report to you, the House of Delegates of the South Carolina Medical Association, on the activities and accomplishments of your delegation to the American Medical Association. As chairman of the delegation, I have reported to the SCMA membership through our excellent *Journal of the South Carolina Medical Association* the actions, after each meeting, of the AMA House of Delegates. If you have not done so in the past, I would encourage each of you to read these reports so that you may understand the importance and worth to you and your patients of the most powerful, most listened to medical organization in the world—the American Medical Association.

As I have said in previous reports to you, I feel the South Carolina delegation is one of the most visible and productive delegations in the AMA. The delegates and alternate delegates you have elected over the past years have been dedicated to the important task of representing you and your patients at the national level. I would like to thank you for that dedication.

As each of you surely knows, the South Carolina Medical Association has seen one of its own AMA delegates rise to what is perhaps the most important medical positions in the world. Dr. Randolph Smoak of Orangeburg has been, since June of last year, Chairman of the AMA Board of Trustees. In this singularly important office, he has represented American medicine at the very highest national and international level and he has done it in a manner, which reflects ability, confidence and knowledge. We should all be proud of the man South Carolina has endowed to medicine and to the great job he has done in representing patients and physicians in every arena.

In addition to Randy, South Carolina's visibility and impact at the AMA level is present in others of the delegation: Dr. Dan Brake remains a member of the Council on Legislation, Dr. Chris Hawk is just completing his first year as a member of the Council on Scientific Affairs, and in June, I will be assuming the chairmanship of the Southeastern Delegation, the largest coalition of state delegations in the AMA.

Three years ago, at this meeting, I reported to you the undertakings of an endeavor to strengthen and broaden the membership and effectiveness of the American Medical Association by "restructuring" the Federation. In this effort, there has been a redistribution of seats in the House of Delegates—those, which have been occupied by the state organizations' delegates and especially those, which have been representing the various specialty societies. This effort in my opinion, is starting to bear fruit, evident by the more active and larger delegations from these various societies. I am convinced that the strength of the American Medical Association for the coming years will lie in the joint forces of state medical delegations working in conjunction with the specialty societies to give national medical leadership. This leadership will work for the benefit of all patients and every physician's practice.

Toward that end, I have reported to you in the past about the interest and involvement of the specialty society delegates who are from South Carolina, and their willingness and eagerness to meet with and work with the SCMA's delegation. These physicians deserve mention, along with their specialty associations: Dr. Ed Kimbrough from the American Orthopaedic Association; Dr. David Osguthorpe from the American Academy of Otolaryngic Allergy; Dr. Marion Burton from the American Academy of Pediatrics; Dr. James Scully from the American Psychiatric Association; and Dr. Greg Slachta from the American Urological Association. In addition, your current president, Dr. Stephen Imbeau has just resigned his position as SCMA Alternate Delegate and assumed the role as a delegate from the American Academy of Allergy, Asthma, and Immunology. I salute each of these physicians who have shown a steadfast devotion to representing their various specialties but who, at the same time, have demonstrated responsibility to the task of representing—without parochialism— all physicians, regardless of specialty affiliation, in this state and in this country.

The past year began, as we will all recall, with AMA in the throes of a monumental problem. At that time, an egregious mistake had been made in contracting with a large corporation, the Sunbeam Corporation, to allow Sunbeam to use the AMA logo in advertising their products. In retrospect, the blame lies with many, and many have faced up to the folly of the decision. In the debacle which followed, there were firings, resignations, job reassignments and—most of all—recriminations. One of the changes which was made, I am happy to report, has resulted in the hiring of a leader whom I hope you will all meet during the Annual Meeting, our new EVP, Dr. Ratliffe "Andy" Anderson. I shall make reference later in this report to one of the most impressive summaries of AMA activities I have ever read, a report to the AMA House of Delegates which Dr. Anderson delivered to the Interim meeting in Hawaii in December.

Other changes which arose out of the "Sunbeam Affair", are in the offing; all of which in my opinion, will ultimately strengthen the structure and governance of the American Medical Association.

At the time I am writing this report to you, there are very important concerns in the minds of physicians in this country. The Health Care Financing Administration (HCFA) which runs Medicare, seems to be on a steady track in proposing new measures and regulations which demand additional paperwork from physicians. Most often now the threats arise from development of a new set of Evaluation and Management (E&M) guidelines which seem designed to make documentation of office examinations and procedures an even more cumbersome, convoluted task than previous guidelines. Equally as contentious are the demands that physicians define "medical necessity" and produce presumptive diagnoses before ordering some of the simpler laboratory studies. Being a general internist myself, these requirements are particularly heinous. Besides these demands, however, there is now the specter of being threatened with allegations of "fraud and abuse," allegations which could perhaps, bring sanctions, fines, and even imprisonment to an honest physician.

Many in the AMA and many physicians over the country feel the time has come to "draw a line in the sand" and to refuse to "negotiate" with HCFA about such things as E&M codes or laboratory "necessity". I think it would be better to try—as the AMA is trying—to stay at the table and achieve what we can. To this point, however, HCFA has been adamant in its plans.

Patient's Bill of Rights—Although falling short of complete success in passing the entire bill, the elements the House of Delegates did pass represent real progress, targeting goals such as making health plans accountable for decisions they make.

User fees—AMA's efforts once more have been successful in having the final 1999 budget reject implementation of user fees for physicians in the Medicare program. I might add that this savings for physicians amounts to many times the cost of AMA membership.

Scope of Practice Concerns - The AMA enjoyed success in getting the Department of Veterans Affairs to refrain from allowing non-physicians from performing laser surgery. This was achieved in conjunction with the American Academy of Ophthalmology. In addition, working with the American Psychiatric Association, the AMA has raised the level of concern which physicians have regarding the expanded roles of non-physicians such as psychologists in prescribing.

PRO Sixth Scope of Work - Although the physician population heard little about it, HCFA, during the past year, proposed changing the current role of the PRO from a quality and education-oriented program to one which would focus on billing errors. Working in conjunction with hospitals, patient groups and PRO organizations, the AMA has succeeded in delaying such a change in PRO activities.

Post-Payment Audits - The AMA has grave concerns about the fundamental fairness, extrapolation techniques, and number of carrier errors regarding the Medicare carriers ability to perform post-payment audits and is aggressively lobbying Congress and the Administration about our concerns.

Science, Technology, and Public Health Standards - Working through publications and through the Internet, a variety of releases to and for physicians have come from the AMA, regarding such issues as firearm safety, child exploitation, alcohol abuse, tobacco use, prevention, and control. Also, special needs of the elderly and of adolescents have been studied and addressed.

Ethics Standards - Numerous issues are of AMA concern. They are the ethics of End-of-Life Care, Managed Care, Genetics, Research, and Academic Affairs. The Council on Ethical and Judicial Affairs (CEJA) has been extremely productive in addressing the many controversial questions surrounding such issues.

I hope I have interested you in the wide areas of involvement of the American Medical Association. It is unerringly clear that the AMA is having a great difficulty with declining membership, and I am once more calling upon you, the leaders of South Carolina medicine, to become knowledgeable and involved in AMA activities. As I have said to you many times over the years, I feel that not belonging to the AMA is a "cop-out" of enormous proportion. Like SCMA, the AMA does so many good things for physicians. It is incomprehensible to me why every physician does not belong and does not actively support it.

Thank you again for the opportunity to serve you as an AMA delegate, call upon your AMA delegation if we can be of any service to you. I promise prompt response.

Walter J. Roberts, Jr., MD
AMA Delegate &
Delegation Chairman

ATTENTION POTENTIAL AUTHORS

The Journal of the South Carolina Medical Association is currently accepting manuscripts.

The mission of *The Journal* is to advance the art and science of medicine; to promote the ideals of the South Carolina Medical Association; to encourage scholarship and good will among South Carolina physicians; and to disseminate information specifically applicable to the health care of South Carolinians. We encourage original articles and letters to the editor of potential benefit and interest to the members of the South Carolina Medical Association.

All manuscripts and correspondence should be addressed to **The Editor, The Journal of the South Carolina Medical Association, P.O. Box 11188, Columbia, SC 29211.** For a copy of the *Information for Authors*, please contact Dana Kickey at the South Carolina Medical Association at (803) 798-6207, extension 234.

OTHER REPORTS

THE CHIEF EXECUTIVE OFFICER

It is my pleasure to report to the 1999 House of Delegates on the activities of the South Carolina Medical Association and its subsidiaries.

Let me begin by bringing to your attention a couple of changes that have taken place within the organization this past year. The name of the South Carolina Institute for Medical Education and Research has been changed to the SCMA Foundation to provide an identity that reflects the fact that it is a charitable organization that can accept donations and that uses the money to further medical education and research.

On the staff side, after conducting a nationwide search, we have hired a Chief Operating Officer to provide additional management to our increasingly complex organization. Mr. Ron Fitzwater was the successful applicant and he joined the SCMA staff on January 4, 1999. Ron comes to us from Ohio were he served as the Executive Director of the Columbus Medical Association. Ron also served as the Executive Vice President of the Orange County Florida Medical Society and was Assistant Executive Director at the Academy of Medicine of Cleveland. He has a BBA and a MBA in accounting and has earned the Certified Association Executive designation of the American Society of Association Executives. Ron and his wife Karen have three children and are residing in Columbia.

As you will note in the audited financial statements included in the Report of the Treasurer, the SCMA and its subsidiaries had a very good year in Fiscal 98-99. Currently, we are on track to have another good year with the exception of the Members Insurance Trust, which is being hit by rising costs especially in the area of prescription drugs. The MIT Board is in the process of having an actuarial study done and rates will be adjusted based on the recommendation of the actuaries. SCMA Financial Services continues to grow and this year became the designated agency for the South Carolina Dental Association. We are planning a significant change in the operation of PCN. For the past seven years we have used a company called ACMG to provide administrative support. Effective August 1, 1999, we will begin administering the program in-house. This conversion has been underway since January and we anticipate a smooth transition. This past year we incorporated a new organization called Physician Direct which is a Third Party Administrator that will take over claims processing for the Members Insurance Trust on January 1, 2000. The SCMA Foundation continues to grow through contributions and the expansion of the Section 170 program. All of our subsidiaries have reports in the handbook that provide more detail.

This year is the first session of the 113th General Assembly and we are dealing with a number of significant changes. The election of a new Governor has resulted in a change in the leadership of most of the state agencies with whom we work. The makeup of the Budget and Control Board has changed from a republican majority to a democratic majority and the democratically controlled senate has become much stronger than it was under the republican administration. All of these changes have resulted in additional efforts on the part of staff as we acquaint ourselves with the new leaders of state government. Currently, we are tracking more than sixty bills that cover a wide range of topics. The Report of the Interspecialty Council for Legislative Activities contained in your delegates handbook will provide you with a detailed list of these bills and the position of the SCMA.

The SCMA and its subsidiaries continue to grow and as a result of this growth, we have outgrown our building and have rented additional space to accommodate PCN. Moving PCN out of the headquarters building has given us room for the continued expansion of SCMA Financial Services. If the growth continues, we will have to evaluate our long-term space needs and develop a plan to accommodate those needs.

This year, the SCMA has made a significant effort to increase the level of participation by South Carolina physicians in the American Medical Association (AMA). The catalyst of this effort was a chart we received from the AMA that clearly indicated that if the current decline in AMA membership continues the AMA will cease to exist by the year 2022. To date, our efforts are succeeding and I encourage all who are not AMA members to become one.

The financial affairs of the SCMA and the subsidiaries remain healthy, and our membership continues to grow. I refer you to the reports of the treasurer and the secretary for detailed financial and membership information. I expect the growth to continue during fiscal year 1999-2000.

Finally, on behalf of the staff of the SCMA, I want to express our sincere appreciation for your support and for giving us the opportunity to serve you.

William F. Mahon
Chief Executive Officer

SPECIAL GUEST:
EDGAR RATCLIFFE ANDERSON, JR., M.D.

When Dr. "Andy" Anderson assumed the position of Executive Vice President and Chief Executive Officer of the American Medical Association it was, in his own words, "the single most significant assignment" he has ever accepted.

Dr. Anderson has had many assignments in his distinguished career in medicine. He has been Board-Certified in Family Practice, Preventive Medicine and Dermatology. He continues to practice Dermatology to this day.

Prior to joining the AMA, he served as Dean of the University of Missouri-Kansas City Medical School and CEO of Truman Health Center in Kansas City.

As CEO of Truman Health Center, he managed a 500 bed tertiary care system comprising a teaching hospital, long-term care facility, behavioral health unit and outpatient facility which had more than half a million visits annually. Truman Health Center employs 2,600 people and has an annual operating budget of $200 million. It is the principal source of health care of the indigent in Kansas City.

In 1994, he became Surgeon General of the United States Air Force, a position in which he was responsible for more than 50 thousand employees assigned to 87 medical facilities around the world. There, he oversaw an annual budget of $4.7 billion and assets of $5 billion.

In 1996, Dr. Anderson was honored by the American Medical Association as a recipient of the Nathan Davis Award, given to local, state and federal leaders whose contributions have promoted the art and science of medicine and the betterment of public health.

Dr. Anderson is a member of the AMA and served in the House of Delegates while he was Surgeon General of the Air Force. He is also Past President of the Association of Military Surgeons of the United States.

Dr. Anderson is 58 years old, a graduate of Louisiana State University where he received his undergraduate and MD degrees. His internship was at Philadelphia General Hospital and he completed his residency in surgery at Boston City Hospital.

He has been married for 28 years to the former Sandra Caston and they have three children. Dr. Anderson counts among his hobbies a love of flying, golf, sailing, and skiing.

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The ice cream booth is compliments of Physicians Care Network (PCN), and the popcorn is compliments of SCMA Financial Services, Inc. Info Avenue will sponsor a refreshment break.

The Gala President's Reception is compliments of Carolina Physicians Advisory Service.

Editorials

A VERY SHORT HISTORY OF THE MEDICAL PROFESSION, AS TOLD TO PATCH ADAMS

Patch Adams is a must-see. As Patch, a maverick medical student on a mission to humanize a teaching hospital over the objections of a stuffy dean, Robin Williams shows why he is arguably the most endearing American actor since the late Jimmy Stewart. But the movie raises some serious questions. What has gone wrong with medicine and the medical profession? Why do audiences usually applaud at the ending?

Convinced of the healing power of humor by a stay in a psychiatric hospital, Patch enters medical school. No sooner is he there than he sneaks onto the wards, puts an enema bulb on his nose, and develops a first-class clown act for the patients and staff. Things take a serious turn when a group of laypersons air their gripes about medicine at a lunch counter. Why do we have to fill out paperwork during an emergency? Why a $250 bill for a sprained ankle, a $1000 bill for antibiotics? Why can't the government provide health insurance for everybody? Patch dreams up a system where doctors and patients will be co-equal partners in a free clinic based on laughter and love. He builds it and they come.

Things go well until Larry enters. Larry is a troubled young man with a history of multiple emergency room visits for self-mutilation. Patch's girlfriend, Corinne Fisher, finds Larry's far-away look disturbing. Patch seems unconcerned: "If we can't show him compassion, who can?" One evening while Patch is away pilfering supplies from the teaching hospital, Larry calls for help, for "someone to talk to." Corinne walks into a murder-suicide. Persuaded by his friends not to drop out of medical school in his despondency, Patch graduates to pursue his dream.

Corinne's death, I submit, shows how compassion untempered by competence does everyone a disservice. But the larger point of *Patch Adams* is his confrontation with the medical profession, of "the way things have always been done" as represented by the supercilious Dean Walcott. This prompted me to ask how Patch Adams (by whom I mean Williams's character, not the real-life physician on whom the script was based and to whom no offense is intended) might have responded to different epochs in our collective history.

Let us briefly review the history of medicine from the perspective of what historians and sociologists call "the professional project"—the efforts of those who practice an occupation to define their cognitive, ethical, and institutional frameworks in such a way as to establish a large measure of authority and exclusivity (Table).

Patch would probably have thrived in classical Greece. Our fuzzy notion that a proud, monolithic medical profession arose then and there from the mists of antiquity turns out to be an illusion. To be sure, the Hippocratic writers would have agreed with Dean Walcott that Patch showed "excessive happiness;" they asserted "the man of uncontrolled laughter and excessive cheerfulness is considered vulgar."[1] But medicine in Greece was hardly synonymous with Hippocrates and his followers. There was in fact no established medical profession. A wide variety of healers of different sects, often peripatetic, competed for those who could afford their services. Patch would have been right at home.

Patch would likewise have enjoyed the Middle Ages, although he would have encountered some of the same problems that bedeviled him at the fictional "Virginia Medical School." Physicians trained in the medieval universities began to organize themselves into guilds. The guilds, subordinate to the universities in principle but not always in practice, developed statutes dealing with apprenticeships, examinations, and licensing designed to enforce the profession's claims to exclusive control over the scope of practice. Patch could have chosen to join either a guild or the swelling ranks of those (including women except for midwives) who practiced extralegally.

During the Enlightenment, Patch might have preferred to live in Scotland. It was there that a young physician named John Gregory, influenced by the philosophy of David Hume, reintroduced compassion into medical practice and in so doing may have invented the medical profession as we know it today.[2] Patch might have sought out also the Scottish political economist Adam Smith (famous for *The Wealth of Nations*), who responded to a growing market in M.D. degrees by questioning the very principle of privilege based on this or that higher degree. We can picture him marching down Princess Street in Edinburgh, a merry activist.

Patch would have rejoiced during the early years of the French Revolution during which the guilds, universities, and scientific academies of the Old Regime were abolished. *Laissez-faire*, an extreme form of deregula-

SOME LANDMARKS IN THE HISTORY OF THE MEDICAL PROFESSION

Classical Greece	1. Schools of medicine are organized, generally around a founding persona. 2. There is considerable professional fragmentation around various sects.
The Middle Ages (6th through 15th centuries)	1. Medicine, theology, and law become institutionalized within universities. 2. Practitioners organize themselves into guilds with statues dealing with apprenticeship, examinations, and licensing
Renaissance and early modern period (16th-17th centuries)	1. Boards of physicians (protomedicato) are named by the crown and given power to examine, license, and police (Sicily, Italy, Spain) 2. Colleges of physicians separate from medical school faculties are founded; Guilds are vested with licensing authority (England)
The Enlightenment (18th century)	1. State patronage gives status and autonomy to various guilds and healers; divisions of labor are encouraged. 2. Later, power and autonomy of guilds are undermined from opposite directions by central government and free enterprise
The French Revolution (1789-1799)	1. Guilds, universities, and academies are abolished, allowing laissez-faire medicine to flourish for about 10 years. 2. A central "School of Health" is formed in Paris and a strict, uniform licensing system is put in place.
The 19th century in Britain	1. The Apothecaries Act (1815) sets standards of professional education in England and Wales. 2. By the 1880s, higher standards are established through a system of examinations by the royal colleges, along with certification for general practitioners.
International trends in the 19th century	1. National medical societies are founded in most western countries with the no table exception of Germany: Britain (1832); United States (1847); France (1858); Canada (1867). 2. Most countries develop a two-tiered profession consisting of an elite and a broad spectrum of lesser practitioners.
Rise of the medical profession in the United States	1. States create licensing boards; the rights of states to require a license to practice medicine is defended by the Supreme Court (1888). 2. Scientific advances and aseptic surgery bring new legitimacy to medical practice.
Course of American medicine in the 20th century	1. As the location of practice shifts to physicians' offices and hospitals, specialists begin to dominate a practice based on experimental science. 2. Third-party payers come between the patient-physician relationship. 3. Medicare and Medicaid legislation (mid 1960s) reduces the charitable component of medicine but places practice increasingly under government control and scrutiny; Medicine becomes increasingly expensive and therefore burdensome to society and business; professional autonomy is increasingly challenged by lay administrators, government, and alternative healthcare providers.

tion, flourished for a decade. Just about anybody could buy a permit to practice medicine. Then came the 1794 National Convention that gave the organized medical profession an effective monopoly over medicine in the cities. Patch might have slipped out of Paris for the countryside to practice among the less-sophisticated.

During the early decades of the 19th century, Patch would probably have joined the ranks of one or another irregular healers who resisted "heroic therapy" based on bleeding, blistering, and purging. These included the homeopaths with their low doses and the Thomsonians with their herbs. Patch's later difficulties might have begun in 1888 when the Supreme Court of the United States defended the rights of states to require a license to practice medicine. Following the Flexner report, Patch would have found it necessary to embrace rigorous scientific medicine to remain within the law as allopathic practice gained power and prestige. He would have lamented the increasing domination of medicine by specialists. He would have been concerned about rising costs, and would sense the inevitability of regulation of medical practice by government and business.[3]

But I believe that, if given the chance to live during any era and in any place, Patch would choose the here and now: 1999 in the United States.

The movie's redeeming moment comes when Adams and Dean Walcott square off before the Board of Medical Examiners with Patch's career at stake. Friends and patients line the balconies and foyer. The Board concludes that while Patch's refusal to conform may not be entirely admirable, his passion for healing, his "pure flame," should not be extinguished. As for the dean—well, he should loosen up and learn to laugh. Thus, the medical profession embraces Patch despite its reservations. Patch's future patients will be much better off for his decision to stay in school, to become an orthodox physician (at least in his own way) as opposed to veering off toward one or another brand of alternative medicine.

Dr. Jordan J. Cohen, president of the Association of American Medical Colleges, recently wrote, "The key to valuing the profession is to profess its values."[4] Each generation has the chance to reinterpret these values within the context of its own times. Each generation of physicians should enter dialogue with its public. Organized medicine, like all human institutions, may have its flaws yet remains the optimum forum for such dialogue. The board's verdict on Patch is a wonderful affirmation of organized medicine's willingness to listen, to learn, to love, and to risk change. But please—no enema bulbs.

—CSB

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On the Cover:

SEVENTY FIVE YEARS AGO

Dr. Edgar A. Hines, Editor-in-Chief, from Seneca, S.C., in preparation for the Association's annual meeting, wrote in *The Journal of the South Carolina Medical Association,* an introduction to the location of the meeting:

> The people of Orangeburg are looking forward with a great deal of interest to the meeting of the South Carolina Medical Association in this city on April 15, 16, 17, 1924. Orangeburg, better known as the "City on the Edisto," is situated fifty miles South of Columbia on the main line of the Southern Railroad between Charleston and Cincinnati, and eighty miles East of Augusta on the main line of the Atlantic Coast Line Railroad between Augusta and Washington, with a population of about 11,000, including suburban sections, is one of the most noted sections of our Southland from an agricultural standpoint. . . . Orangeburg takes high rank in educational, industrial, commercial and agricultural activity. . . . Practically every crop that will grow in the temperate zone will do well here.[1]

The cover picture for his month's issue is the Orangeburg town square taken from a postcard of unknown date. The name Orangeburg was chosen to honor William, Prince of Orange, the son-in-law of King George II of England. First named Edisto by the early settlers of the area, Orangeburg was one of ten townships created in 1730 by Gov. Robert Johnson and South Carolina's General Assembly to encourage settlement.

Jane McCutchen Brown
Waring Historical Library

REFERENCES
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Alliance Page

REPORT OF THE SOUTH CAROLINA MEDICAL ASSOCIATION ALLIANCE

A year ago, I humbly stood before you filled with enthusiasm, excitement and trepidation. Enthused about the wonderful opportunity we had to make a difference, I was excited about all of you who were so willing to work together to make those opportunities happen. The trepidation came from following in the footsteps of so many past state presidents whom I have worked with and admired. Today, I am still filled with enthusiasm and excitement but I am also overcome with gratitude. I am enthused that so many of you continue to be willing to give your time to this organization and that we have so many new people who are becoming involved. I am excited about our new president, Shirley Meiere. Having had the opportunity to work closely with Shirley this year, I know that great things will be happening in the year to come. I am grateful to have been given the opportunity to be the president of this Alliance. It was a great honor, but it is each one of you that has made it the experience of a lifetime. I thank you from the bottom of my heart; you cared and were willing to share and you dared to make changes and that for me is happiness.

As I look among you today, I see many friends who took the theme I chose for the past year, ***Happiness is Caring, Sharing and Daring to Change***, and ran with it. You cared about each other by planning ice cream socials and family barbecues to welcome new physicians and their families to the community. You polled your members for their favorite restaurants, shops, and books, and shared that information with old and new members in your newsletter. You worked to strengthen your membership by starting special interest groups, providing innovative social functions like *Candlelight in the Hills, Shopping in Atlanta, Couture 98, a Supper Bowl Party, and Gourmet Cooking with Eric Batten.* You demonstrated your caring for your spouses by doing a *Valentine Blood Drive, Doctors Who Cook, a Doctors Day Golf Tournament, and a Beach and Barbecue Party for Doctors.* You demonstrated your caring and concern for your community with a legislative forum, and a SAVE Awareness display at a Reba McIntyre concert. You bought car seats for your hospital maternity ward and provided beanie babies for pediatric patients in the emergency room. You raised funds for Breast Cancer with Fashions for a Cause. You purchased one Cairnsiris helmet for firefighters to use and were the catalyst for a second helmet being purchased. You sold Sacs-O-Stuff, poinsettias, and greenery to provide your community with things like an emergency fund for prescriptions for patients in need, Christmas goodies for needy children and aid for your abuse shelters. You hosted Ghost Walks and developed Kids Help Kids, which involved your children in collecting beanie babies for children in abuse shelters. You distributed refrigerator magnets with emergency numbers on them for the elderly and you developed a program where you paired elders with abused children. These are just a few of the things you did in your counties.

For the State Alliance, you embraced and supported the state's effort to have the emergency numbers of our abuse shelters, our rape crisis numbers, and our Elder Abuse hot line number listed on the emergency number page of every phone book in our state. You all adopted a shelter and provided shoe boxes filled with essentials for the residents. You attended our Legislative Workshop and took the idea of hosting county receptions home. Now the seeds of hosting these receptions have been planted, and it is my hope that our legislative efforts will continue. You cared about the future of medicine in South Carolina by supporting *Rx du Jour*, a cookbook produced by the alliance for the benefit of medical education. Is there any wonder that I am overwhelmed?

As William Shakespeare said, "We know what we are but we know not who we may be." I believe we have great things in us. Like Martin Luther King, I also have a dream.

I have a dream that will promote a sense of good will; kindness and well being for all people—you might say a sense of happiness.

I have a dream that the best healthcare in the world will continue to be available to anyone who needs it.

I have a dream that health decisions will be made by physicians, patients and families without the intrusion of the government, lawyers, or managed care.

I have a dream that people will realize that you cannot have the best without paying for it.

I have a dream that physicians and other health professionals can provide charitable acts of kindness freely and without fear.

I have a dream that violence against women, children, and the elderly will cease to occur.

I have a dream that violence will no longer be a major part of our entertainment and that our young and impressionable children will be protected from its effects on television, in the movies, and on computers.

I have a dream that families will be more nurturing, not only for the children, but also for spouses and the elderly. I do not believe that it takes a village to raise a child; I believe it takes a family. If we have to resort to the village the battle may already be lost.

I have a dream that we will continue to educate our brightest and our best to attend to our future health.

I dream that our spouses will once again be portrayed as who they are—caring and compassionate men and women concerned about the patient, not the dollar.

I have a dream that we will continue to work together with legislators to stop government intrusion into patient care.

I have a dream that our Alliance will continue to value its rich history and experienced members as well as embrace the new and exciting ideas of our youth.

I have a dream that we will continue to care.

I have a dream that we will continue to share out time and talent.

I have a dream that one day there will be no reason to dare to change because we will have reached our dream.

And when my dream is ended, I believe there will be happiness.

M. Alexis Alia (Mrs. Richard T.)
1998-1999 SCMAA President

Classifieds

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- **3007 Palm**—True panoramic views from this 4BR/41/2 BA second row home. New construction. If you're looking for the top of the line, this is it!
- **6 Sand Dune**—Oceanfront Beachside 4BR/3BA home with pool and tennis access. Great rental, fully furnished.

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*"Matters of Interest
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Thornton & Thorne give the medical community something to think about this month.

THE PRICING OF TERM LIFE INSURANCE

Prices have plummeted and product choices have multiplied over the last several years

There have been pricing wars in the term life insurance marketplace since the beginning of this decade. Over this time, premiums have plummeted, product choices have multiplied, and the number of underwriting classes has tripled.

New term insurance legislation (Regulation XXX) will be effective January 1, 2000. This legislation will negatively affect the price of term insurance purchased after its effective date. This legislation, which has been pending for a number of years, was first planned to be effective on January 1, 1996.

When that effective date didn't happen, the assumed effective date was rolled forward; first to 1997, then 1998, and finally 1999 (recent adoptions make the year 2000 effective date concrete). As the effective date rolled forward, companies fought for market share by continuously reducing premiums.

The companies also began offering term policies with level premiums that last many years. Policies with level premiums for 10, 15, 20, 25, and even 30 years are available. Premiums have decreased so much that premiums for 20-year term today are about what they were for 10-year term only a few years ago.

Companies also developed more underwriting classes. At the beginning of the decade, insureds were classified either as "smokers" or "non-smokers". Most companies today offer at least "standard" and "preferred" risk classes while some also offer a "preferred-plus" class.

All these classes are for healthy insureds but the requirements get more and more stringent to qualify for the next class. Estimates are that approximately 50% of healthy applicants will be classified as standard, 35% will be classified as preferred, and 15% will be classified as preferred-plus.

The following premiums can serve as guidelines for the various risk classes. They are examples only and do not represent any one company's products. Premiums are for $1,000,000 of 20-Year Term for an insured who has not used tobacco for at least 3 years:

UNDERWRITING CLASS	*Age 40*	*Age 50*	*Age 60*
Standard	$1,600	$3,300	$8,200
Preferred	$1,100	$2,600	$6,300
Preferred Plus	$900	$2,200	$5,400

These premiums clearly demonstrate the importance if being classified in the best risk class for which you qualify. Underwriting decisions vary, so an applicant who is a standard risk with one company may very well qualify as a preferred risk with another.

The advice of a knowledgeable agent who is familiar with the underwriting practices of various companies is vital to help you through this maze. Quite often, the company with the lowest premium does not offer the best value. There are many factors other than price that you should consider.

Regulation XXX will have a negative impact on term policies purchased after its effective date. That, and the fact that most people do no get healthier in the future, make today the best time to re-evaluate your term life insurance needs. The window of opportunity may be very short.

Views expressed herein are those of the authors and in no way represent SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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VOLUME 95
NUMBER 5
MAY 1999
PAGES 177-218

A NOT-SO-DISTANT MIRROR: J. HEYWARD GIBBES ON THE PRACTICE OF MEDICINE, 1927

JOHN C. HAWK, JR., M. D.
(MAY 21, 1918 - MARCH 7, 1999)

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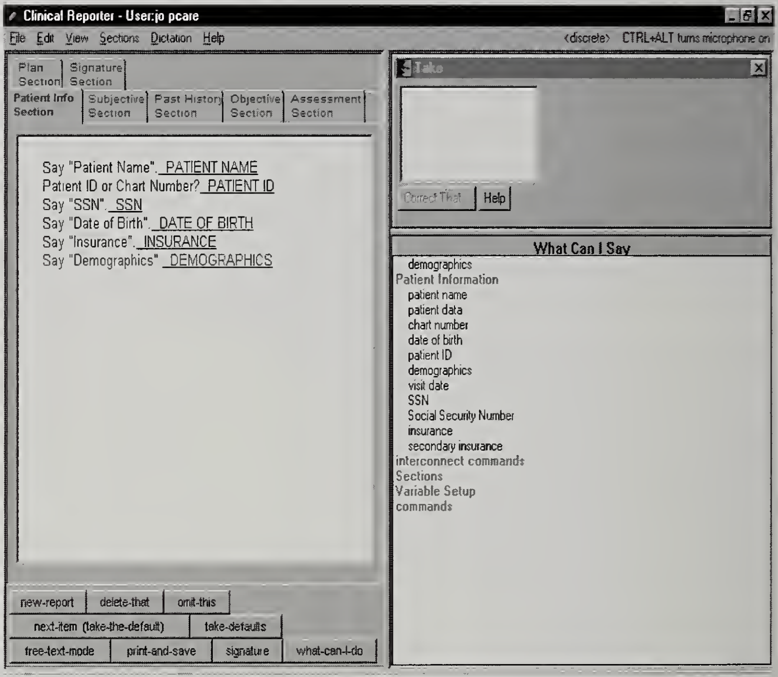

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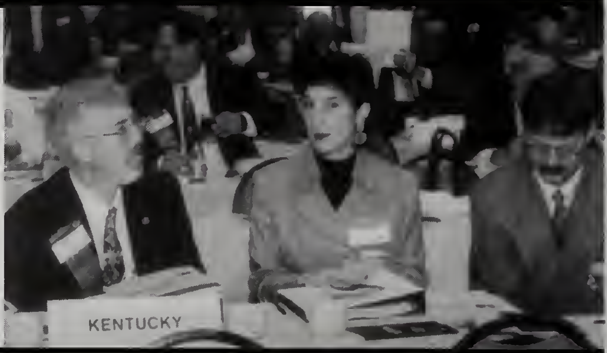

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American Medical Association
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President's Page

WELCOME

In my installation address at the Annual Meeting, I covered several issues that I would like to say to the readers of *The Journal*, who might not have been present in Charleston on April 29-May 2. First of all, you missed a great meeting. As usual, the SCMA staff did a wonderful job of planning for this event. A meeting of this magnitude doesn't just happen! It takes months of preparation, planning, and perseverance—and that is just what the staff did. Under the able leadership of CEO Bill Mahon and our new COO Ron Fitzwater, the SCMA had a most successful meeting—for the one hundred and fifty-first time.

The SCMA is comprised of a myriad of physicians with different practice types, practice styles, and practice configurations. We have members who work for themselves, physicians who work for other physicians, physicians who work for hospitals in a variety of arrangements. In other words, our association is now a melting pot. Our membership continues to grow while other similar organizations shrink. One would assume that the SCMA is doing things right! Ours cannot be an association providing all things for all people but, we are trying—and we have been successful in these efforts.

Providing six subsidiaries to serve physicians provides something for every physician in the state. Whether it is insurance for members and dependents or practice management services, or a foundation providing scholarships for medical students, SCMA has it. Whether it is a practice network of physicians or an advocacy organization offering CME or a savvy legislative program that watches out for the practitioner, SCMA has it. These are among the many reasons for our success and our continued growth. However, we should not sit back and rest on our laurels. We must—and will—continue serving the physicians of South Carolina.

We physicians occupy special and unique positions in our communities. First of all, we are fortunate to have been blessed with the opportunity to have received the education we did to practice our healing arts and science. Lets never forget from whence we came and then work to make things better for those who are less fortunate than we are. In future iterations of this page, I will discuss other responsibilities that we as physicians have to our families, our practices, our communities, and to each other.

Finally, let me say I truly appreciate the opportunity to serve this association as president. My predecessor, Stephen Imbeau has been a good friend and colleague for some time now and I admire the job he did as president. To follow him in this position is an additional honor and I thank him for the good job he has done for the SCMA.

William H. Hester, M. D.
President

The Journal™ OF THE SOUTH CAROLINA MEDICAL ASSOCIATION
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Roger A. Gaddy, M.D., Delegate
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Carol S. Nichols, M.D., Alternate
R. Duren Johnson, Jr., M.D., Alternate
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SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

Dana Kickey, Editor
(803) 798-6207, in Columbia • (800) 327-1021, statewide
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May 1999

HIGHLIGHTS OF THE APRIL 29-MAY 2, 1999 BOARD OF TRUSTEES MEETINGS

South Carolina Political Action Committee (SOCPAC): The board elected the following physician to the SOCPAC board: Willie Edwards, MD, to represent the 6th District.

Creatine Statement: The board approved adoption of the National Federation of State High School Associations' position on drugs, medications, and food supplements, specifically, the use of creatine.

Site Acquisition: Due to the need for expansion of the current SCMA headquarters, the board approved acquisition of a piece of property off of Fernandina Road.

MEDICAID UPDATE

Status of Medicaid HMOs

The Department of Health and Human Services (DHHS) has received notice from HealthFirst, Incorporated of its intent to voluntarily withdraw from participation in the Medicaid HMO Program effective June 30, 1999. HealthFirst offered services in Greenville and Spartanburg counties with an enrollment of around 500 members. DHHS will notify HealthFirst's members of their auto-disenrollment from HealthFirst effective June 30, 1999. Medicaid eligibles will continue to receive services through the Medicaid programs available in their county of residence.

DHHS is currently contracted with one HMO, Select Health of South Carolina, Incorporated. The membership as of April 1, 1999 is 8,098. Select Health's Medicaid enrollment has been suspended based on action taken by the South Carolina Department of Insurance. In the event that Select Health's Medicaid participation ceases, recipients will be provided information on Medicaid programs available in their county of residence.

Lillian "Bunny" Jones, New Deputy Director for Programs

Lillian "Bunny" Jones, who has guided the development of women's and family Medicaid programs for the past decade, has been named Deputy Director for Programs at DHHS by Director Sam Griswold. Prior to joining DHHS in 1989, Ms. Jones had been a planner, treatment consultant and intervention coordinator with the SC Department of Alcohol and Other Drug Abuse Services.

MEDICARE UPDATE

Workshop News

Don't miss the opportunity to attend Palmetto GBA, LLC's workshops. They are packed full of the most current and accurate information you need to file claims to Medicare Part B. Please see their complete workshop schedule in the May *Medicare Advisory.*

Palmetto GBA, LLC strives to offer the workshops in convenient locations throughout the state. It is important that you meet their registration deadlines because they estimate the attendance shortly after the deadline to determine if they will continue with a scheduled workshop or cancel it. If you register late or show up at the door, you run the risk of the workshop being cancelled without your knowledge. You may check PGBA's website, www.pgba.com, for a current listing of all workshops.

MSNs No Longer Suppressed

Effective April 1, 1999, Medicare will send Medicare Summary Notices (MSNs) to beneficiaries in **all** instances except for the following claim types:

- Laboratory
- Demonstrations
- Exact duplicates
- Statistical adjustments

(see Medicare, page 3)

ELECTION RESULTS OF OFFICERS AND TRUSTEES OF THE SCMA

Following are the results of the elections which took place during the House of Delegates at the SCMA 151st Annual Meeting on Friday, April 29, 1999. All elections were by acclamation.

President-Elect: Roger A. Gaddy, MD
Secretary: Richard E. Ulmer, MD
Treasurer: J. Capers Hiott, MD
Speaker: Robert M. Sade, MD
Trustee, District 1 Oswald L. Mikell, MD
Trustee, District 1 (Metropolitan): Patrick J. Kelly, MD
District 3: Julius Leary, MD
District 5: R. Duren Johnson, Jr., MD
District 7: Gerald Harmon, MD
Young Physicians Section: James N. Mock, MD
AMA Delegates: J. Chris Hawk, III, MD
Roger A. Gaddy, MD
AMA Alternate Delegates: J. Capers Hiott, MD
R. Duren Johnson, Jr., MD

The following position was elected at House of Delegates on Sunday, May 2, 1999.

Vice-Speaker: Andrew J. Pate, MD

The following positions were elected at the Board of Trustees reorganization meeting on Sunday, May 2, 1999.

Chairman of the Board: R. Duren Johnson, MD
Vice Chairman of the Board: Boyce G. Tollison, MD
Executive Committee Member-at-Large: John P. Evans, MD
Clerk: James N. Mock, MD

PHYSICIANS CARE NETWORK UPDATE

Currently, there are 7,098 participating physician locations, 834 participating ancillary locations and 96 participating hospitals. PCN has 104 contracted groups with 62,688 covered lives. We will continue to provide information as contracts are received.

NEW GROUPS:

- The Piedmont Club; effective 4/1/99

If you have questions about PCN, please contact Judy Legg, Network Coordinator, PCN at (803) 798-6207, extension 257 or statewide at 1-800-327-1021. You can also send an e-mail message to judy@scmanet.org.

RESOLUTIONS ADOPTED BY THE SCMA HOUSE OF DELEGATES ON SUNDAY, MAY 2, 1999

- *Electronic Claims Filing Fee* was adopted as amended. This resolution calls for the SCMA to work to eliminate the electronic filing fee by Companion Technologies through negotiation, legal, regulatory legislative initiatives or any other legal, reasonable means.

- The resolution outlining a *Student Seat on the SCMA Board of Trustees* was adopted as amended. The resolution creates a voting seat for a member of the SCMA-Medical Student Section on the board.

- *Resource of Alternative Medicine* was adopted as amended. This resolution calls for the SCMA Board to study the issue of alternative medicine and consider the formation of an ad hoc committee to investigate resources of information and compile a compendium on the state of scientific knowledge regarding alternative health practices in our state. This compendium will be available as reference for physicians.

- *Preventive Medicine* was adopted as amended. This resolution calls for the SCMA to utilize all resources within South Carolina and its delegates to the AMA to persuade Medicare and other insurance carriers to take a more active role in preventive medicine, allow reimbursement coverage, and encourage screening tests which are necessary for

(see Resolutions, page 3)

(Resolutions, continued from page 1)

a more active role in preventive care.

- The resolution involving the *Sale of Non-Health Related Goods From Physicians Offices* was referred to the SCMA Bioethics Committee for further development.

- *Medical Genetics* was adopted as amended. This resolution calls for genetic services to be provided by a South Carolina licensed physician, preferably an American Board of Medical Genetics (ABMG) certified/eligible Medical Geneticist and/or a non-physician genetic professional, practicing under the supervision of a South Carolina licences ABMG certified/eligible medical geneticist and that the SCMA pursue appropriate legislation to ensure compliance.

- *Proposed Consolidation of Administrative Functions* was adopted as submitted. The SCMA will provide administrative support, programming direction and organizational networking for any county or specialty society which indicates an interest in this service.

- The resolution involving *Preprinted Prescriptions* was adopted as submitted. This resolution states that the SCMA will support changing the South Carolina Board of Pharmacy Practice Act section 40-43-86(E)(8) so that more than one drug and set of instructions may be preprinted on a blank.

SCMA WORKSHOPS

MANAGING PRACTICE EXPENSES AND DETERMINING COST OF SERVICES

June 10, 1999

Continuing demands on physicians' practices for improved data and management information relating to costs associated with providing services have become increasingly significant to practice and physician managers. Patient care with financial accountability is a reality for survival in today's competitive market. This workshop addresses the importance of prudent overhead management and reducing expenses. Participants will learn techniques and tools to help practice and physician managers determine the cost of providing services. Register by June 1, 1999.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, ext. 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

(Medicare, continued from page 1)

Beneficiary Right to Itemized Statement

Requirements of the Law

Effective January 1, 1999, section 4311(b) of the Balanced Budget Act of 1997 gives beneficiaries the right to submit a written request for an itemized statement from their provider/supplier for any Medicare item or service. The law requires that you furnish the itemized statement within 30 days of the request, or be subject to a civil monetary penalty of $100 for each unfulfilled request. If an itemized statement is received, the beneficiary may request the Medicare contractor to review specific issues (i.e., services not provided, billing irregularities, and appropriate measures to recover any amount inappropriately paid).

On April 1, 1999, the Medicare Summary Notice (MSN) began to include the following statement: "You have a right to request an itemized statement which details each Medicare item or service which you have received from your physician, hospital or any other health supplier or health professional. Please contact them directly if you would like an itemized statement."

Guidance Concerning the Format and Substance of the Itemized Statement

Included below are suggestions regarding the types of information that might be helpful for the beneficiary to receive on an itemized statement. These are recommendations only. Since most of you have established an itemized billing system for internal accounting procedures and billing of other payers, the furnishing of an itemized statement should not pose a significant additional burden. However, some of you may not regularly create or furnish hardcopy itemized statements and may wish to reexamine your internal billing and tracking process to ensure that it has the capability to comply with this new requirement. You should not charge beneficiaries for the itemized statement.

Itemized Statement Recommendations:
- Name of beneficiary
- Number of services furnished
- Date(s) of services
- Description of item or service furnished
- Provider/supplier charges
- An internal reference or tracking number

LIVE BIRTH REPORTING REQUIREMENTS

On Thursday, April 15, 1999, the South Carolina Medical Association's Maternal, Infant, and Child Health Committee heard a presentation by Buddy Hudson. Hudson is DHEC's Director of Public Health Statistics and Information Systems, as well as the State Registrar for Vital Records. Included in his presentation was the state's definition of live births and fetal deaths that was adopted in South Carolina in 1995.

"Live Birth" means the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy, which, after such expulsion or extraction, breathes, or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. Heartbeats are to be distinguished from transient cardiac contractions; respirations are to be distinguished from fleeting respitory efforts or gasps.

Reporting Requirements:
All live births are to be reported regardless of the length of gestation, weight, or viability.

South Carolina adopted this model effective May 11, 1995.

"Fetal Death" means death prior to the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy, and which is not an induced termination of pregnancy. The death is indicated by the fact that after such expulsion or extraction, the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. Heartbeats are to be distinguished from transient cardiac contractions; respirations are to be distinguished from fleeting respitory efforts or gasps.

South Carolina adopted the model definition effective May 1995.

Although these definitions are not new, all members of the medical community do not use the standardized reporting requirements.

MARK YOUR CALENDAR

"Medical Aspects of Addiction"
A Conference on Medical and Substance Abuse Professionals
June 11-12, 1999
Kingston Plantation Embassy Suites Hotel
Myrtle Beach, South Carolina

Sponsored by the SC Society of Addiction Medicine, SC Department of Alcohol and Other Drug Abuse Services (DAODAS), SC Association of Alcoholism and Drug Abuse Counselors, and SC Association of Prevention Professionals and Advocates

For information, please contact Madelaine Miller, DAODAS, (803) 734-9585, or Lou Shumate, DAODAS, (803) 734-9548

IS YOUR OFFICE READY FOR Y2K?

PMSI can help! Let us come into your office and review your computer system to help you determine whether your office can handle the year 2000 bug. This kind of systems analysis is key to a safe transition into the new millenium. If there is a problem, let us help you discover and correct it before the bug gets you. ***For more information, call Anne Harvin Gavin at (800) 327-1021, extension 260.***

WANT TO KNOW HOW YOU STACK UP WITH YOUR E & M UTILIZATION?

While the key to selection of any CPT code should be the supporting documentation, evidence of undercoding may indicate possible lost revenues. On the flip side, overcoding may indicate the possibility of potential liability issues. Let us compare your distribution of E & M services with expected patterns found in national distribution information for your specialty. We will provide you with both a numerical and graphical analysis of the comparison and you can see just how you really do stack up. ***For more information, call Anne Harvin Gavin at (800) 327-1021, extension 260.***

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A NOT-SO-DISTANT MIRROR: J. HEYWARD GIBBES ON THE PRACTICE OF MEDICINE, 1927

CHARLES S. BRYAN, M. D.*

J. Heyward Gibbes was the first physician in Columbia to limit his practice to Internal Medicine and the first South Carolinian to be elected a fellow in the American College of Physicians. A brilliant diagnostician, he exemplified the ideal of the physician as scholar, humanitarian, and civic leader. The redoubtable Dr. John Eager Howard of Baltimore once exclaimed, "I cannot imagine a man as smart as Heyward Gibbes." Dr. William W. Ball, former editor of both *The State* and *The News and Courier*, called Gibbes "one of the wisest of all South Carolinians." Gibbes's career in private practice spanned nearly half a century—from 1913 until shortly before his death in 1962—during which scientific medicine in the United States came into full blossom. His meticulous account of what he considered to be a typical day on December 8, 1927, offers a not-so-distant mirror to the joys and frustrations of medical practice in our own era.

JAMES HEYWARD GIBBES AND THE MEDICINE OF HIS TIME

The details of Gibbes's life have been previously summarized.[1-2] He was born in Charleston on September 7, 1888, of a prominent South Carolina family whose members included Dr. Robert Wilson Gibbes (1809-1866), his grandfather, who was South Carolina's Surgeon General during the Confederacy. The death of an older brother at age 8 of typhoid fever probably turned Heyward's interest toward medicine at an early age. At age 15, Gibbes worked part-time in the office of another Dr. Robert W. Gibbes and his two partners. Gibbes later described the prevailing conditions:

> At that time, in the year 1903, there were two hospitals in Columbia—the Columbia Hospital and a hospital for Negroes operated by Dr. Matilda Evans. Both of these hospitals might be spoken of as having been primitive, and the care of the sick in them was of a similar nature. I remember many of the doctors who were practicing in Columbia at that time, and I recall them as men of fine ideals and good intentions. It is no reflection on them to say that their medicine and surgery, as judged by present-day standards [1955], was crude. . . . The cause of disease was in large part unknown, pathological anatomy was just beginning to come of age, pathological physiology was a relatively unexplored field, the biological responses to infection and to other forms of invasion were just beginning to be studied, the matter of deficiency diseases was an unknown wilderness, the application of chemistry and physics to clinical medicine belonged entirely to the future, and aseptic surgery was in swaddling clothes. The treatment of disease was empirical and individualistic. The nearest

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* Address correspondence to Dr. Bryan at 2 Medical Park, Suite 502, Columbia, SC 29203

FIGURE 1—James Heyward Gibbes as a young physician.

> approach to rationality in this field was philosophy rather than medicine—for there was not enough science to lift medicine out of the doldrums.[3]

Despite these misgivings, he chose to study medicine.

Gibbes's ability to excel in anything he undertook became apparent in college. He had the unique distinction of receiving letters in football from both Clemson College (which he attended for one year) and the University of South Carolina as a dropkick specialist—once succeeding from 47 yards, equivalent to a 53-yard field goal without a holder. He also played varsity baseball. Graduating Phi Beta Kappa, he went to Baltimore and the Johns Hopkins University School of Medicine. There he was influenced especially by the personage of William Henry Welch and by the legacy of William Osler, whom he saw on a single occasion. In 1912 he graduated sixth in a distinguished class and then went abroad to study for a year in England and in Germany, where he was impressed by the neatness and efficiency of the medical clinics. Like Osler years before, he was nearly *verdeutsched* to the extent that he would sometimes say of World War I that the United States had fought the wrong country.

In 1913 Gibbes returned to South Carolina, married Eugenia Felder Salley of Orangeburg and entered private practice (Figure 1). He found conditions somewhat better compared to ten years earlier:

> When I came back to Columbia in 1913 to practice medicine, even more advances had been made. Under the leadership of Dr. Legrande Guerry, surgery had been raised to a position of dignity and solid accomplishment. Dr. J. J. Watson had largely graduated from general practice to Internal Medicine. He was fond of saying that he had learned his medicine in back-yards and alleys. No matter where he got it, he was one of the keenest clinicians that I have ever known. Under their influence, together with that of Dr. William Weston, Sr., the hospital conditions here had vastly improved, and medicine, as a whole, was on a fairly high plane. Of course, in retrospect, many deficiencies could be pointed out. It is safe to say, however, that medicine in Columbia, in Charleston, and in several other sections of South Carolina, has become progressive, and it has continued to follow this course ever since.[3]

Gibbes agonized over whether to volunteer for World War I until he was advised by General William Crawford Gorgas in Washington that his "local activities would be of more value just now and that he would direct me into active service should the occasion arise." [4] This proved to be an understatement.

Gibbes served his community in many ways during his long career. During World War I he served as a contract surgeon for the U. S. Army and was a member of the State Committee on Red Cross Medical Service and of the Medical Advisory Board of the South Carolina's sixth district. From 1934 until 1962 he served as Chief Medical Consultant at the Veterans Administration Hospital in

Columbia, where the residents habitually tried to stump him but seldom succeeded. From 1926 until 1961 he served on his district's School Board, including 20 years as chairman. When he stepped down it was remarked that he had been the man behind the scenes for progressive changes. Although he resisted integration of the public schools, he was generally regarded to be a political moderate and he introduced measures to reduce the discrimination in pay for African American teachers.[5] He served as president of the South Caroliniana Library Society for ten years. He also worked to improve public transportation in Columbia.[6] In 1935 Gibbes was seriously considered for the presidency of the University of South Carolina.

But for all his public involvement, Gibbes was first and foremost a physician. In 1955 he reminisced:

> In the fifty-two years since my introduction to medicine in South Carolina, I should say that the Medical Profession of this State had progressed just as medicine itself has done. This has come about through progress in pure science, through the development of a science peculiar to medicine, through the adjustment of medical education to these changes through the improvement of hospital facilities, and through the adjustment of medical education to these changes, through the improvement of hospital facilities, and through the dissemination of knowledge by medical journals representing societies and special groups. . . . The medical organizations of this State would seem to be on a solid basis, so that the progress that we can recognize in the past fifty years should go steadily forward—and at an accelerated rate.[3]

He suggested that the major deficiency in South Carolina medicine was in clinical investigation but that "it is not too much to hope that the developments in our Medical College may remedy this." The latter remark was probably an allusion to the opening that year of what is now the Medical University Hospital, a turning point in the evolution of clinical investigation in South Carolina.

GIBBES AS A PHYSICIAN AND HIS MEDICAL WRITINGS

Although he spent his career in private practice, Heyward Gibbes epitomized the scientific, investigative spirit that infused American medicine during the first half of the 20th Century. His national reputation was evident in his election in 1927 to the American Clinical and Climatological Association, and he served as vice-president of the Johns Hopkins Medical and Surgical Association. His bibliography (Appendix I) would be the envy of many full-time academicians.

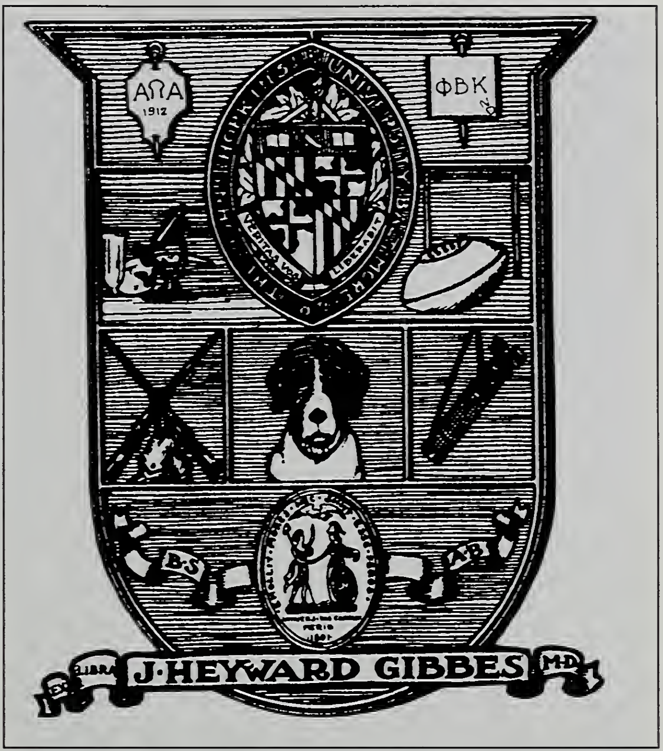

FIGURE 2—Gibbes's bookmark indicates his belief in a balanced life with emphasis on learning (University of South Carolina, ΦBK; Johns Hopkins University School of Medicine, AΩA; science, sports, and bird dogs.)

Case reports published in national journals on such subjects as cerebrospinal fluid rhinorrhea and tick paralysis attest to his diagnostic abilities.[7-8] His more impressive papers, however, reflect careful evaluations of consecutive patients aimed at answering clinical questions. Thus his 1929 paper on heart murmurs, published in the *American Heart Journal*, was based on observations from 1,166 consecutive office examinations. He concluded that innocent murmurs were more common than was generally thought at the time.[9] Similarly, his 1931 paper on brucellosis, published in the *Southern Medical Journal*, was based on serologic specimens obtained from 100 consecutive office patients. The results confirmed his suspicion that serologic tests for brucellosis were poorly-standardized and the results often misleading.[10] He also tabulated data from his practice pertaining to syphilis, infectious arthritis, hookworm, hypertension, diabetes mellitus, and other problems.

Gibbes's published essays testify to his commitment to what is now called the biomedical model of disease and specifically to the German notion of *innere Medizin*, which became the basis for Internal Medicine. He wrote that

> the physical diagnosis of disease is to-day based upon the naturalistic conception that all disease has a natural origin, runs a natural course, produces natural reactions in the body, results in natural changes in the body tissues and terminates by processes that are rationally understandable and detectable. . . . . The sciences of physics, chemistry, and biology have widened the scope of diagnostic medicine and have led to scientific certainty in many of its investigations. Of course, with all this, much yet remains to be done.[11]

In the same essay, however, he payed homage to the art of medicine, "the personal equation of the physician in diagnostic medicine." When he mentioned "the mental and emotional fields of diagnostic medicine" that "do not lend themselves to . . . scientific approaches," he was alluding to what we now call the biopsychosocial model of disease. Gibbes often reflected on patients' psychological vulnerabilities, their susceptibility to iatrogenic diseases, and their misguided use of alternative therapies. His thinking about these issues can be traced to 1912, the year he graduated from medical school, when he purchased a copy of Oliver Wendell Holmes's *Medical Essays* and underlined the following passage:

> On the natural history side, medicine is a science; on the curative side chiefly an art. This is implied in Hufeland's aphorism: "The physician must generalize the disease and individualize the patient."[12]

This dualism is strikingly apparent in his diary.

GIBBES AND THE THEORY AND PRACTICE OF MEDICINE AS REVEALED BY HIS DIARY

Gibbes's diary of December 8, 1927 reveals the importance he attached to self-discipline and to leading a balanced life (Figure 2). By rising early and reading medicine for one hour, he kept up with the medical literature despite living, as he put it, "a relatively isolated medical life." He once remarked that

> if discipline is not fundamental to man's hope of excellence, I do not know of any manner

FIGURE 3—Gibbes with a bird dog (possibly his favorite setter, Comet.)

> by which he can develop excellence. Discipline has to come from the outside in the early phase of man's life, and is of little value unless it results in discipline from the inside. Any concept, to my mind, that does not put the emphasis on the requirement of discipline is a farce and a failure.[2]

He felt strongly that every day should include physical activity, ideally out-of-doors, and it was thus typical of him that on this December day he went bird hunting in the afternoon. It was sometimes debated which he loved most—his books or his bird dog (Figure 3). When he reluctantly agreed to have his portrait painted, he chose the books (Figure 4). Gibbes had one of the finest private libraries in Columbia; his favorite volume was Laurence Sterne's *Tristram Shandy* which he treasured especially for a passage on the beneficence of hobby-horses.[13]

In his "typical day" in December 1927 Gibbes encountered several diseases for which we now have antimicrobial therapy: gonorrhea, liver abscess, typhoid fever, and hookworm. Other diseases such as diabetes mellitus, heart failure, and major depression can also be treated much more effectively than was then the case. The physician's personality assumes greater importance when therapeutic options are limited. If Gibbes comes across as an authoritarian personality, he also seems genuinely committed to guide his patients toward "a higher and a better plane" of living.

Not one to hide his superior intelligence and ability, Gibbes was not always popular with his fellow physicians. Moreover his expressed concern about the quality of the local hospitals engendered animosity in several quarters. From his diary it is apparent that other prominent physicians tried to enlist him in their battles with the hospital's hierarchy. Thus Drs. Robert Seibels and William Boyd sought his aid, whereupon Gibbes offered to help "if the trustees are really anxious to improve conditions." Whether Gibbes's aid was solicited is unrecorded. He served as president of the Columbia Medical Society, but had little interest in medical politics and apparently never served as chief-of-staff at any of the Columbia hospitals despite his prominence in South Carolina medicine.

He did, however, reflect on the nature of a medical community. On the one hand he could exult:

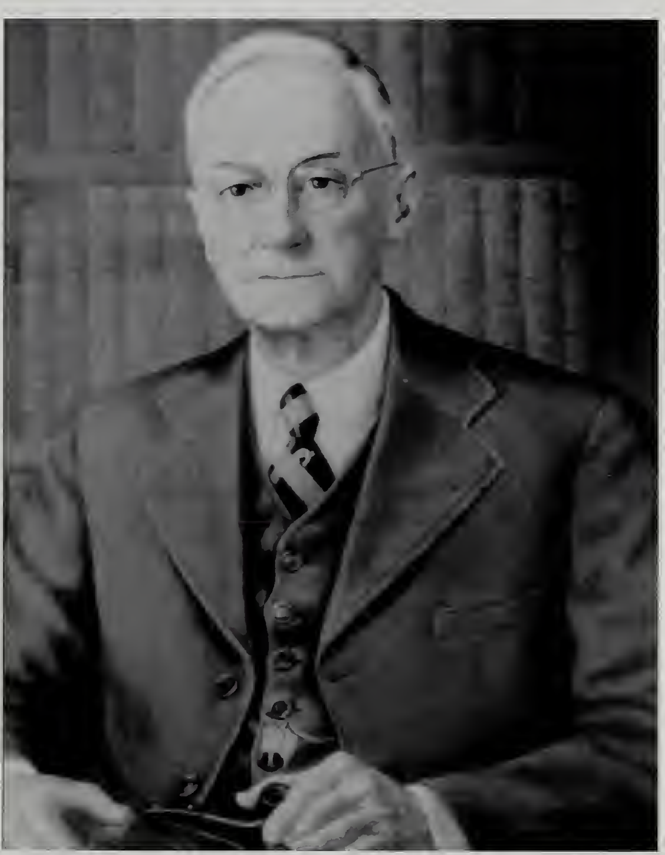

FIGURE 4—Having reluctantly consented to a formal portrait, Gibbes chose to have it done in his library, to wear the necktie of the Pithotomy Club (an undergraduate medical school club at Johns Hopkins) and to hold Laurence Sterne's *Tristram Shandy*.

> Medicine is beyond the scope of any individual. A well regulated medical community. . . reminds one of a delicately adjusted piece of machinery, the efficiency of the integral parts being necessary to the proper working of the whole.[14]

On the other hand, he could lament:

> I believe the saddest phase of a physician's experience is found in the lack of good-fellowship, and the internal wranglings and dissensions that mark their relations with each other. This condition is too wide-spread, extending over too great a space of time, to allow of an explanation by reasons that exist outside of the profession itself. It has made the physician unhappy, and it has caused the public to look askance upon a group of men for whom individually they entertain affection and admiration. It has resulted in the forma-

> tion of a so-called code of ethics which the laity have come to look upon as highly artificial and to distrust because of their feeling that under its dictates the interests of the physician are too often conserved at the expense of the patient's.[15]

Gibbes seemed to have begun his day on an optimistic note, but to have ended it somewhat depressed. Perhaps this was prompted by the two after-hours intrusions on his time concerning matters about which he could do relatively little. A perfectionist by all accounts, Gibbes must have felt, as physicians still feel today, a large measure of frustration when he could do so little to help his friends in dire straits. Thus he went to bed wondering "if I had to do it over again, whether I should choose clinical medicine as a life's work."

As the years progressed, Gibbes continued to make short diary entries from time to time. On June 10, 1962, he noted after a dinner celebrating his 48th wedding anniversary that "we have had a happy & affectionate life together & I think that we are dangerously near to being satisfied with our family & general surroundings. It seems to me that I am aging a little more rapidly than she is." Five months later, on November 15, he died after a short illness. He was eulogized as one of the outstanding men of his day. An editorialist for *The State* newspaper remarked that "the accumulated benefits to a community and state from the talents and spirit of a man such as Dr. J. Heyward Gibbes defy precise weighing. . . [which is] the ultimate tribute to the results from his services."[17] Gibbes might have found solace in this tribute he once gave a friend:

> The very virtues which we possess are in large part the gifts that our friends have made to us, for their idealistic thought and conduct, being admired by us, become a part of our own thought and conduct through imitation and emulation.[16]

ACKNOWLEDGMENTS

Of the many people who have shared their reminiscences of J. Heyward Gibbes, I am indebted especially to his daughter, Mrs. Susan Robinson. I also acknowledge a literary debt to the late Charles R. Holmes, to whose paper the reader is referred for other perspectives on Gibbes's personality.

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APPENDIX II
A MEDICAL DAY IN SOUTH CAROLINA: DECEMBER 8, 1927
J. HEYWARD GIBBES, M.D.

7 A.M.

I am at my desk, pencil and note paper at hand, skimming through the pages of medical journals, abstracting an article now and then, and mildly wondering why so many crimes against style and proper writing should be committed in the name of medical science. During my interne days at Johns Hopkins Dr. Wm. Welch had told me that the way to read medical articles was to read the conclusions first, and then go back to the body of the article if the conclusions seemed to be of sufficient importance to warrant a testing of their soundness. This advice had stood me in good stead. It had enabled me to keep in fairly close touch with medical literature and the advances of medical science even while leading a relatively isolated medical life. An hour spent at my desk each morning served to dispose of some fourteen journals in the course of a month.

After breakfast, I begin my professional activities of the day at Miss Eastway's Rest Home. This is a comfortable little cottage, tastefully arranged, and administered in a kindly manner by its own competent and soft-hearted owner. This little institution is especially suited to the management of nervous patients or those who need dieting. It avoids most of the smells and noises of general hospital, and the atmosphere is much more conducive to quietude of mind and spirit—for everyone except the doctor.

8:30 A.M.

"Good morning, Miss Eastway."

"Well, Rosa, how are all of the patients this morning?"

"They are about as usual, Dr. Gibbes. All of them rested pretty well except Mrs. H. She took her pack and luminal at 8 o'clock and then rang her bell off and on during the night. She said that the noises worried her."

"Very well, you go ahead with your plans for breakfast. I shall see them and let you know if I need anything."

"Hello Mr. D. I hope you give a good report of yourself this morning."

"Doctor, I had a pretty rough night of it. Dr. [M. H.] Wyman massaged my prostate, stripped my seminal vesicles and passed some sounds on me yesterday afternoon, and I had more or less pain with a desire to pass urine rather frequently. But I know that all of this will ultimately do me good and I can stand it. Do you think that this treatment will finally make my sexual power stronger? You know I have been having trouble with losing my erection just as I am ready to enter. It seems to be hard enough before hand, but gets soft just at the wrong time."

"Yes, I have no doubt but that he will help you a great deal. Of course, you must realize that chronic gonorrhoea many times presents a serious problem and requires time and patience for treatment. You are in good hands and can be assured of the best possible results. Just turn the matter over to Dr. W., and do not try to think too much about it yourself. Your efforts to analyze your own physical problems will do no good and will simply tend to worry you."

"Yes, sir, I realize the truth of what you say, and am quite willing to do as you suggest. But you know I have suffered so much and so long that my whole nervous system is shot to pieces. If I can ever get to where I can sleep again and my digestion will straighten out, I believe that I can be a man again. But you know that cold pack seemed to bring on asthma and I had to use my atomizer off and on all night. Don't you think I might get along without the pack for a night or two? And what do you think of my taking the somnos that I brought with me for a night or so? It is almost the only way that I can get any sleep."

"Mr. D., we have not done more than make a start with you. You must remember that I told you in the beginning that our efforts to change what have come to be systematized bad habits in you were certain to be something of a trial for you, that you had been following the path of least resistance so long that your will and manhood had been impaired, and that you would from time to time beg to go back to the easy means that you had been using to find comfort. But I also pointed out to you that this easy way is not the right way and that from it you can expect no improvement nor any permanent betterment of your condition. Your genital condition is now a relatively small part of your problem. It is character building, resistance to easy things, and the making of a man that you and I are striving for. You are certainly not ready to throw it all overboard after this short trial. You know there is a hymn which tells you to fight manfully onward and that each victory will help you some other to win. What about it? Are you ready to quit or to let me guide you onto a higher and a better plane than you have been living on for the past few years?"

"Doc, you are right! I know that I have lost my grip, and I mean to get it back. I am going to leave it to you, but please make it as easy for me as you can."

"All right, old man, you've got the stuff in you and together we shall bring it out. Have a good day and you will sleep better tonight. Don't forget to eat a plenty. You are well under weight, and an improvement in this respect will help us a lot in what we are doing. So long."

"Mrs. H., how are you today?"

The patient is a fat, middle-age woman lying stiffly in bed, eyes closed and an expressionless face. In response to the morning's greetings the eyelids are slowly lifted and then allowed to close again. No change of countenance and no verbal response.

"What is the matter, Mrs. H., are you talking today?"

"I am too weak."

"You certainly do not look the part."

"But the noise is too bad. The trains, the trains! They run all night. Move me, move me where I can't hear them trains."

"Now, Mrs. H. listen to me. Do you want to get well?"

"Yes. But I can't stand the noise. I am this way from over-work. Just kept going when I should have given up. Move me where I can't hear the trains."

"Mrs. H., I am not going to move you. You wanted to come here and your husband and Dr. T. brought you here at your own request. If you really want to get well, we can help to do it. In fact, I am not going to let you stand in your own way. If you will help me only a little, I shall get you out of your depression very quickly. Certainly, you do not wish to stay as you are for two years, as I am told you did once before, of no use to yourself or anyone else, shirking your responsibilities and making trouble for those who are nearest and dearest to you? It is not by moving you away from trains that we can help you. This desire to run away from things that are annoying you is simply another evidence of the low state that your moral character has reached. You can only learn to be brave by facing danger—not by avoiding it. In the same way, you must now learn to accept some of the things that you look upon as disagreeable. Will you let me help you on this basis, or do you still want to be moved? If so you had just as well go today as later."

"Well, I will try again, but those trains are awful."

"Mrs. B. you look fresh and happy this morning. I am sure you are well on the way to feeling like yourself again."

The patient is a young married woman, heavy in body and mind. Fourteen years ago, she had spent some months in the Hospital for the Insane because of a severe depression. She had been at Miss Eastway's for about two weeks, having exhibited a host of nosophobic ideas, and psychotherapy had done much toward ridding her of them.

"Yes, doc, I feel good today. Slept real good last night, and didn't take nothing either. My breast hurts, though, and Dr. [Roger Gamble] Doughty says that it might have to be operated on. Do you believe he knows?"

"Yes, he knows. But he is going to avoid it if possible. It won't be very bad anyway. You keep on now, working out your nervous troubles, learning to sleep without drugs and thinking straight about the part that you are to play in life, and the breast will not appeal to you as such a bad thing to go through with after all."

"Alright, doc, I know that I am a heap better, and I am going to be ready to go home before very long."

"That's fine. I am going to be able to brag on you yet. Good-bye."

The next patient is a young woman, 22 years of age, pretty but relatively uninformed, married within the year to a widower of 36 years who presented her with three children of his previous marriage. She has found difficulties of adjustment, the children quarrelsome and non-cooperative, and she has found her husband's affection too much divided between her and them. One of the children has been so impossible that she has finally succeeded in having her husband "give it away" to one of his sisters. In the meantime she has become a "nervous wreck," troubled with insomnia and indigestion, aches and pains from head to foot, and a sensitive condition of the vagina that makes sexual relations painful and at times impossible. A local surgeon found that she had "a nerve in the vagina" which has been "left there from the rupturing of my maiden-head" and had removed this tissue under a local anesthetic. She had experienced no relief, and her husband and family physician had brought her to me to see what else could be done. They both expressed some scepticism as to results, but both registered relief at the idea of being relieved of her for a time. Two weeks had passed since they left her.

"Good morning, Mrs. C. You look as fresh and pretty as one could wish, and I believe that you are now entitled to the position of prize patient. Am I right?"

"Yes, sir, I feel better now than I have in months. I slept all night last night. But I have not had any of those dreams that you wanted me to write down. I have got the pencil and paper here, though, if they do come. But it seems to me now that I really do know something about myself. The gas on my stomach does not worry me like it did and when my heart beats fast I know that it does not mean that it is dangerous. And I am so glad to know that I can get better without all of those medicines that I was taking at home. I wrote my husband yesterday that your way of treating people was something like Christian. . ."

"Wait a minute, young lady, don't you tell anybody that I am teaching you to be a Christian Scientist. There is a vast difference between doctrines of a false cult like that, which is neither a religion nor a science, and the physiological principles that I have been trying to get into your head. You know I have told you all along that the sensations which you have been having were normal ones coming from normal organs, and that your difficulties were due to your misunderstanding these sensations and misinterpreting them. I do not want you to deny reality, but to understand it."

"Yes, I know the difference now, but I did not know just how to express it to my husband. Anyhow, I am going to clean out my medicine closet as soon as I get back home."

"But, Mrs. C., there is something just as important as your feeling well. You are going to have to behave well when you get back home or all of your efforts will have gone for nothing. I hope that you have been thinking about your responsibilities to those children. Adjustments must come from you—not from them. They are too young to make allowances. While you can make the allowances, tolerate these little jealousies, and so care for them as to make them belong to you and you to them. No other decision on your part will give you the satisfaction that comes from being right. I really think that you should insist on taking back the child that you had your husband give away. This will make you feel a great deal better, I am sure. Think it over for the next few days."

"Dr. Gibbes, I have thought it over, and have made up my mind that I want the child back. It is a grand idea that you have given me, and I fully intend to carry it out. My husband has been real good to me and I want to be good to him."

"Now, Mrs. C., this brings us to the matter of your marital relations. You cannot be good to your husband and have the attitude toward sexual relations that you have had in the past. The sexual act, properly performed, is a natural function. There is nothing evil about it, and no physical debilities result from it. In fact, the primary reason for existence is to reproduce your kind, and this implies the sexual relation. The only thing that we *know* as immortality is the reproduction of yourself in your offspring. Your difficulties here have been mental, a failure to understand, and an inability to act properly because of this misunderstanding. You have failed in the performance of a duty and have denied yourself one of the greatest natural pleasures and gratifications. We know that you are physically normal and that you can act normally if you will."

"Yes, sir, I have thought about what you told me, and I believe that it will be all right. It really did seem to hurt me a lot at times, and when Dr. M. told me that it was due to a nerve I thought that something must be wrong with me. But his operation did no good. I believe that I understand it now."

"Well, we shall begin getting you up in the next few days and plan for your going home in about ten days. Good-bye."

I next enter the room of an elderly widow of means, an visitor from the winter colony at Aiken, who has had diabetes for seven years, and who has been in the hands of many physicians, some good and some not so good. Her experience with doctors of renown has made her critical of our every move, and I have been reduced to the necessity of leaving instructions that she is to be dismissed at any time that she fails to carry out instructions. On this occasion, as I open the door, and before I can extend the morning's greetings, this erudite apostle of Joslin's and Allen's burst forth:

"Come in, doctor, I have many things to set right with you today."

"All right, Mrs. R., I am more or less accustomed to your attitude. Let's have it."

"Well, I am getting weaker and weaker. I am simply not getting enough fat, and you are doing nothing to help my stomach. I simply cannot go on like this."

"Mrs. R. I have wondered several times why you ever come over here. For a person with pretensions to as much sense as you have, you have as little as I have ever seen. You talk about getting weak on the fat that I am giving you when, as a matter of fact, you are now getting twice as much as you were taking when you came to see me. You know that your diet yielded only 1250 C when you came and that you are now getting 1804 C. Think up some more reasonable complaint, and I shall be glad to hear it."

"Well, you took me off of insulin right away, and Dr. Joslin says that it is dangerous to do this."

"Yes, but the fact remains that you have not been hurt by it. You are now getting a daily allowance of insulin that balances your blood sugar at normal with a diet calculated on your optimum weight. You are a pretty person to talk to me of Joslin, and men of his type, when you have had no better sense than to throw their instructions to the wind, to replace their diets with fads and to substitute a high-sounding patent medicine, *Vitallis*, for insulin. The fact that your supposed impending coma that brought you here was really hysteria and weakness from undernourishment was simply your good luck and certainly not your good management. It looks as though I shall have to teach you how to diet and how to behave as well."

"You know that I am ashamed of having taken *Vitallis*, and it is not nice of you to bring it up."

"I am glad to have you admit so much. I have thought at times that I would have to choke you to conquer you, but my hopes of success by milder means are being revived."

"Thank you, doctor, it may please you to know that I have made up my mind not to get very far away from you again."

"I don't know, Mrs. R. that I am entirely pleased, but I shall do what I can to help you. Good day."

From Miss Eastway's I go to the Columbia Hospital, where a fairly typical day awaits me. Unkempt Negro men are carting canvas baskets of trash and dirty linen around the hospital court while in the corridors Negro orderlies, white caps rakishly on the sides of their heads, are sweeping the floors, and juicy-looking Negro kitchen maids are shoving the double-deck tray wagon toward the elevator. Upon entering the rear door of the hospital, I see the superintendent near the front door, lounging against the side of a large oak settee with a cigarette carelessly drooping from a corner of his mouth. I pass Miss S., the directress of nurses who stops me long enough to thank me for having examined two of the pupil nurses a few days before, and pass on to the private corridor, conscious of relief at leaving the *business end* of the hospital behind me.

My first duty is to remove a test meal from an elderly woman who has had a recurrence of ulcer symptoms following a partial gastrectomy one year before.

"Good morning, Mrs. B., I hope you are ready for me to play the part of an Indian giver, for I have given you the bread and water and now must take it back."

"Doctor, I don't know whether I can swallow that tube or not. I have been looking at it for the past fifteen minutes, and the more I look the bigger it gets."

"Now, Mrs. B., listen me out. The little bucket on the end of this tube is no larger than many a capsule that you have swallowed. The tube itself is much smaller, but it is the tube that makes the swallowing hard. The presence of the tube against your throat will, of course, gag you, and you may feel that it is suffocating or choking you. But no real harm will come of it. If you will swallow when I ask you to and take a deep breath when I say and keep your hands off the tube, the tube will down simply enough and the whole thing will be done with before you have time to worry about it. All right, now, open your mouth, let the bucket go well back on your tongue, close you lips but not your teeth, and now swallow once—just as if you were swallowing a capsule. That's right. Now a deep breath—and all of the bad part of it is over with. You did that beautifully."

"Doctor, it was a heap easier than I had expected. Can I have breakfast now?"

"Yes. Miss B., let her have a soft breakfast. I hope that we shall have good news for you tomorrow."

As I stepped out of this patient's room into the corridor of the hospital I met Dr. [William A.] Boyd who said: "Good morning, Heyward, I have wanted to see you for the past day or two. Won't you please look me up before you leave the hospital?" Assuring him that I would, I entered the room of Mrs. H., who had suffered a post-operative infection in the pelvic tissues following a hysterectomy.

"Well, Mrs. H., it certainly is good to see your colour coming back. It seems to me that we can see the difference now from day to day, and your blood test shows that you have gained 8% in haemoglobin in the past week. No so bad, eh!"

"It certainly is fine Dr. Gibbes, and I feel so much better. I have stopped having the miserable gas now, and my appetite is simply ravenous. Do you think that I can get home by Christmas?"

"I hope so Mrs. H. We shall have to talk to Dr. G. about it, but you can count on his letting you go if it is at all right that you should. In the meantime, stick by the eggs and milk, and make Miss Berry put you in the sunshine as much as possible. We are all proud of you."

I am met at the door of the next room by Mrs. K., the sister of the patient who had an hysterectomy done the day before in an effort to remove the focal infection which had produced a deforming and extremely painful infectious arthritis. The patient, Mrs. C., a delicate and refined looking woman of middle age, had presented a most pitiable spectacle when the attempt at examining her had been made a few days earlier. The swelling, deformity and exquisite tenderness of her joints had resulted in almost complete immobility, and even the movement of the bed clothing caused her to wince with pain. She had suffered the loss of many teeth and of her tonsils—but still the "rheumatism" held her in its grip. She had tried Florida and various kinds of lights and baths, but her joints had become steadily worse and her weight and strength had ebbed along with her blood. Her hemoglobin was only 40%. In the face of these experiences and conditions, the patient and her family had decided with doubt and apprehension to act upon the advice that an infected uterine cervix be removed.

"Dr. Gibbes," said Mrs. K., "I really believe that L. is better. I hope that you will agree with me."

"Mrs. K., it is much too soon to form any conclusions about the good that is to come from the operation. Don't let your hopes rise too high, for you know, we have made you no definite promises. It is only that we have done what seemed reasonably right, and we must wait a while to see what has been accomplished."

Upon entering the room I am somewhat astonished to see the patient lying relatively relaxed in bed, and I am even more astonished when she offers me one of her crippled hands and says, "Doctor I have had the most comfortable night that has fallen to my lot in months. Of course, I hurt in the middle and the nausea has worried me some, but I can move my joints almost without pain. Isn't there something that can be done about the nausea?"

"Yes, Mrs. C., I shall do something to help you. You might try little sips of ginger ale, and sometimes a little hot coffee helps a lot. But the chances are that the nausea will wear off as the day goes on and you will be much more comfortable tomorrow. Just grin and bear it in hopes that the joints will continue to get better."

I then meet Mrs. K. again, waiting expectantly at the door, and have some difficulty in keeping my enthusiasm from joining her own. But I succeed in warning her against unwarranted optimism and pass on.

My next visit is in the room of an affable Jewish lady of most ample avoirdupois and good humor—in spite of long suffering and a hopeless disease—multiple abscesses of the liver. She had been ill for months, running a septic fever and having been treated for malaria while an empyema of the gallbladder had spread its infection into the substance of the liver. Three weeks before we had operated on her, hoping that a cholecystectomy would restore her to health. But the operation had shown that nature had all but removed the gall bladder while the metastatic infections had gained their unremitting hold. She had improved following the operation, and was looking forward confidently to ultimate recovery. We had told her family the facts, but no one had the heart to disillusion the patient. I carried in my hand a small paper bag.

"Well, well, Mrs. K. you seem better today than you have been yet—normal temperature and all. I have brought you something that I know you will enjoy—a bag of fine country sausage."

Saying this, I push the bag toward the patient. But she draws her hand away from it and a quizzical expression comes over her face as she says: "Doctor, you know that me and my people don't eat hog meat."

"Yes, but Mrs. K., I am sure that you will make an exception in this case," and, so saying, I empty a plump hen partridge out of the bag onto the bed.

"God bless you, son, I certainly do appreciate this. Rebecca (addressing her daughter), see that the doctor gets those grape fruit and oranges that we put aside for him. And, doctor, I have told my son to bring you a pencil, one that is a pencil on one end, a pen on the other, and a knife in the middle. Now, doctor, I have told my children that I was not going to leave here until you said I could go. You just keep me as long as you can do me any good. Do you think I can go to my daughter's house by Christmas?"

"I don't know, Mrs. K. We all like you so much that we are very likely to keep you longer than is necessary. You don't care anything about Christmas anyhow. Now don't you talk back. Good-bye."

The next patient is a young man of twenty years who was brought to the hospital three days before by his family physician who told a story of the patient's depression and apparently hysterical behavior during the week or ten days preceding. Upon admission the patient had seemed to be unconscious while his arms and legs were in continuous movement. A physical examination had been entirely negative except for the finding of a temperature of 100 by rectum. He had been found to gave a pronounced secondary anemia with no other changes in the blood and the stool had shown many hookworm eggs. The urine had been reported clear and the spinal fluid and eye-grounds revealed no signs of organic disease in the central nervous system. A few hours after his admission the patient had returned to an apparently normal mental status, had corroborated the statements of Dr. B. concerning his present illness, had amplified this story by admitting an unfortunate love affair, and had furnished facts of his past history. The next day he had developed a profuse diarrhoea with blood in the stools and had vomited sanguineous material. His urine had become very scant and was found to be loaded with albumin and casts. His fever had risen and he was semi-stuporous. Still, the physical examination was negative.

On this morning's visit I find the picture essentially unchanged, and I stand by the bed racking my brain for explanations of what I have found and wondering if anything more could be done to throw light on the situation. Sleeping sickness, and meningitis pass out of the picture with the negative spinal fluid. Typhoid fever, malaria and syphilis have been denied by our blood tests. There are no physical signs of pneumonia. Could it be that the carbon tetrachloride which had been given early in the morning had brought about such a profound intoxication. And then a flash—has the boy poisoned himself? The violent gastro-enteritis and the sudden appearance of an acute nephritis strongly suggests bichloride poisoning.

In this state of mind I leave the room and find myself for the first time in contact with his mother.

"Is this Dr. Gibbes?"

"Yes, ma'm."

"Well, I am Mrs. S. Have you found out what is the matter with my boy? Dr. B. told me last night that you had telephoned him that you did not know what his trouble was."

"No, Mrs. S., I am sorry to say that I do not know exactly what the matter is. We do know that he has a violent inflammation, or Bright's disease. But I do not know what brought it about, and I cannot account entirely for his mental status."

"Well, why have you not had an X-Ray picture made of him? If I had known that you did not have all the necessary facilities here I would never have let them bring him to this place. I wish that I had insisted, as I wanted to do, upon them taking him to Vanderbilt."

"Mrs. S. we have not taken X-Ray pictures because there was no need for doing so. I do not know of any way in which they could help us. And I can assure you that we have all the necessary facilities for examining and treating your son. I shall be glad for you to do anything that you think best in the matter. I can do nothing more than tell you the truth. I understand that the boy has been quite blue and depressed for some time. Do you think there is any chance of his having poisoned himself?"

"Dr. Gibbes, I am shocked. You just don't know what the trouble is. I am sure that Wesley is going to die and I do not want him tortured with all of those needles, transfusions and other things."

"Now, Mrs. S., I do not want to unkind to you. But I am responsible for this boy and I am going to do just exactly what I think should be done for him as long as I remain in charge of the situation. I have by no means decided that he cannot get well, and I shall certainly do all that I can to keep him alive as long as possible. You will be very much happier in the end if you do not try to interfere."

The boy's father had joined us in time to hear this statement from mom, and he turned to his wife saying, "Dear, you must leave Dr. Gibbes alone. I have every confidence in him and am sure that he will do all that should be done."

"Well, says Mrs. S., I suppose it will have to be. I have no doubt but that these doctors take an oath when they graduate that they will not stop treating patients until they are actually dead, but I do not want him to be tortured."

After a brief talk with Mr. S. I gladly turned from this to other things.

A brief stop in the room of a typhoid patient, a visit which has nothing of the unusual about it, and I pass on to the public ward to see the old man that I have under my care there. The ward is in a state of confusion. It is full of odours, a Negro orderly is sweeping a pile of trash to the center of the floor while another is encountered in transit with a bed pan, thus partly accounting for my olfactory objections. Two of the beds are partially hidden by loosely flapping and drooping screens. Some of the patients are groaning, others are sitting on the sides of the beds with their bare legs dangling out, one or two are smoking, and one old man makes a liberal deposit of tobacco juice into a pus basin as I pass. Two ambulatory fixtures, patients that I have seen rambling the corridors and porches of the hospital for months are visiting from bed to bed, doubtless digging curiously into complaints of their less fortunate fellows. There is a general air of unkemptness and lack of discipline.

My patient is an old gentleman from Camden who had been brought to the hospital four days before in a state of myocardial insufficiency, auricular fibrillation and with a swollen and tender liver. He had responded somewhat to restriction of fluids, purgation, morphine, quinidine and digitalis, but his ignorance and mental clouding were still in full force.

"Good morning, Mr. H., I believe that the old heart is staging a comeback. I hope that you are breathing better and feeling better, too."

"Doc, I ain't much better. I sure thought that I ought to be operated on. They told me that my gallbladder was what ailed me. If you ain't going to have me cut, I had just as well go home. Won't you let my boy come and get me?"

"Yes, Mr. H., I shall arrange it today. I shall write Dr. H. about you, and I hope you will continue to get better at home." And I leave the ward wondering "what's the use."

I then seek out Dr. Boyd and find him with Dr. [Robert] Seibels in the doctors' dressing room.

"Billy, you said that you wanted to see me."

"Yes, Heyward, I have tried to get in touch with you for several days, but the hunting must have been good as I have not seen you around. Have you heard that they have been planning to have a meeting looking to have a reorganization of the hospital staff?"

"Yes, I have heard some talk about it, chiefly from Roger Doughty who told me that Frank Harvin had approached him on the subject, but I have had no communication from any official of the hospital about it."

"Well, we wanted to know what your attitude was toward the matter."

"Billy, it seems to me that we cannot continue to use a hospital, especially a public owned one, and not stand ready to do our part toward making it as good a one as possible. If the trustees are really anxious to improve conditions, and want to reorganize the staff on a proper basis, I, for one, am anxious to do my part in helping them. But I must have complete assurance from them that their intentions are good and that they will sincerely try to carry them out. I am not in favor of negotiating with any one physician that they choose to represent them, calling him, arbitrarily, Chief-of-Staff, but I should insist upon a meeting between the Board of Trustees and those of us whose help they want so that we can deal directly with them, and put our own estimate upon their assurances, before we enter into any agreement to help them. We are certainly entitled to decency in hospital operation and a reasonable effort at an efficient staff organization before we undertake to assume responsibility for the hospital in any of its departments."

"Heyward, says Bob Seibels, that is almost exactly our position. But we go one step further. It has come to us fairly straight that Dr. O. and Dr. J. ["O." was almost certainly Dr. L. B. Owens, with whom Gibbes clashed over proposed improvements for the Columbia Hospital; the identity of "J." is unclear] have said that you can have no official connection with the hospital except over their dead bodies, and this has caused us to decide that we will have no dealings with the Board of Trustees except through you as our spokesman. We feel that you have looked into the hospital situation as thoroughly, if not more so, than most of us, and it will test the sincerity of the Board to see if they will deal with you."

"Well, Bob, I am not looking for any such job. I did not know that there was any such personal feeling toward me. But, if you fellows think that I represent your views sufficiently, I shall be glad to do anything that you wish. It seems to me that it might be well for us to have a meeting and see if our views are close enough together. Just let me know about it."

After this rather typical medico-political conference, I leave the hospital for the day's work at the office. The routine matters of the mail, answering letters and writing to doctors about their patients, is dispatched in the first half hour, and appointments with patients begin. There are only two of these patients that bring anything out of the ordinary into the day's work.

The first of these is the junior partner in a large, progressive business concern in the community. He had suffered an attack of depression something more than a year ago, had gone into a partially negative state, had refused to talk for almost a year, and had been cared for in an institution for the nervous and insane for many months. He had left this institution about three weeks ago somewhat against advice, the senior partner and I having agreed that he should stay there until about the first of the year, but he had improved markedly since leaving. During the past few days he had put in an appearance at the plant, and seemed inclined to expect that his duties be reassigned to him. The senior partner had been to me for advice, and we had agreed that I must put the matter to the patient in its true light. I did not relish the idea, and was somewhat apprehensive that my attempt to advise him might depress him. But it was the day's work and had to be done.

"Come in, B., old man, it certainly is good to see you around again and looking so much like your old self, too"—and I give the patient a hearty hand shake. "Miss J., you come in too, please, for I want you to hear what we say to each other and to see how much better he really is." I wanted his wife to hear for herself what transpired between us, and not have it possible for the patient to misrepresent to her things that I had said and which he might subsequently interpret as depressing.

When we are seated I turn to the patient's record, reviewing some of the notes about him, and enter the present date.

"B., it has now been about three weeks since you left the Waverley Sanitarium, and the only time I have seen you was when you were on your way to the football game. You were stepping along spryly enough and looked as happy as could be. You must be feeling quite all right again."

"Well, Heyward, I am not entirely all right. I am still pretty shaky. I am sleeping better and have a good appetite, but I still have a lot of trouble with constipation. I was just poisoned from my bowels."

"Doctor Gibbes," says Mrs. B., "I am sure that he is taking too much active medicine. He takes some kind of cathartic compound every morning and then uses mineral oil three times a day. I wish you would do something to make him stop it."

Before I can answer the patient interposes, "Heyward, I want you to know why I left the hospital without letting you know. You remember I told you that I did not want to go to ride, or to try to play golf, because I just could not stand the ideal of going back. Well, I did go to ride with my wife a few days later, and I just said to myself, 'the break has been made now and I will go on home.' I just could not go back. And I am sure that I have been better for it."

"That was all right, old man, I wanted you to do what was best for you, and I have no doubt but that what you have done is the best. But to go back to this matter of constipation. You can correct this matter by natural means, if you will. And you need not have any fears about it while you are doing it. I would not be too abrupt about it, but if you will systematically eat an abundance of green vegetables and fruits, fruit for breakfast, at least two green vegetables for dinner and a fruit and vegetable salad for supper, drink at least three pints of water a day, take outdoor exercise regularly and go to stool immediately after breakfast each morning, you will be surprised how quickly you will begin to have regular movements without artificial assistance. I suggest that you leave off the cathartic compound in the mornings and continue the mineral oil for a time. You can then gradually reduce the mineral oil."

"Well, I will try it, but I can't let myself get clogged up again."

"B., I. tells me that you have been over at the plant during the past few days. How does the old place look to you?"

"It all looks pretty natural. They have made some changes in it, though. I just thought that I would go over and begin to get in touch again."

"Well, you must be mighty careful about it. You are probably not ready to take up any work as yet. You must put yourself back into a normal course of life in a very gradual way. Then, too, you must try to see the matter from the standpoint of the business. I have talked to I. about it, and we have agreed that there are two conditions that must be kept squarely in mind. In the first place, it is necessary to protect you. If you are allowed to take up things too quickly it may react unfavorably upon you. In the second place, the business must be protected, and you should not expect I. to give you responsible duties until he can feel quite sure of your fitness for them. Be willing to go slow, and I am sure that you can trust I. to do the right thing. I am satisfied that you should not have any business to attend to until after the first of the year, and even then only very minor obligations for quite some time."

The patient seems to ponder the question for a few moments, and then he says, "Yes, I am willing to abide by I.'s decision. I know that he is fair and that he has worked for my good."

"All right B., I am glad to hear you talk that way. Take good care of yourself, now, and give your nerves time to build themselves up. Come up to see me whenever you feel like it, but I think that the less you see of doctors the better. Good-bye, Miss J., let me know if I can help you in any way."

The second patient is a blustering, plain-spoken old countryman who had been in the hospital for about three weeks a month ago with jaundice and an enlargement of the liver. He had had his gall bladder drained and stones removed some years previously, but had had no pain since. He was simply weak and jaundiced. We had hoped that his condition was a catarrhal jaundice, and this opinion had been strengthened by a clearing of his jaundice during his stay in the hospital. But he is back today as jaundiced as ever.

"Doc, you see them jaundice has come back."

"Yes, Mr. H., I am sorry to see it. And your liver is still quite large, too. I am afraid that the old gall bladder is responsible for it. You have said that you would not be operated upon, but you should not persist in this idea, for it may be necessary to operate on you to get you well. Have you come down prepared to go to the hospital?"

"No, sirree. To tell you the truth I never would a stayed there the fust time if it hadn't been for Dr. Truesdale. I have just dropped in huh to talk to you for a minit. If you can' do nothin more for me, I am going to see another doctor. I've got his name right huh."

So saying, the patient extracts a very dirty note book from his pocket, thumbs the pages over and over, and at last presents one of them to me. I read the name, "Dr. F. D. Kendall."

"Now, Doc, that feller cured a man from my town after one visit. He told him that they was starvin' him to death and to go on home and eat what he damned well please. That the medicine would cure the jaundis—and it did. Do you think he could help me?"

"Mr. H., I do not think that he will help you, and it is possible that he might hurt you. Do you know nothing else about Dr. Kendall except that he cured the man from your town?"

"Doc, wasn't he the doctor that the govmint put in jail?"

"Yes, Mr. H., he is the very one—and it is likely that he got only a part of his deserts, too. Now, I do not want to see you get in such hands. You go on back home and let me write to Dr. Truesdale about the matter. You know him much better than you do me, and you let him advise you. We want to help you, and I hope that we really can do something for you. Good-bye and good luck."

Then home to late dinner and a short rest. No companion being available, I go into the woods alone with my dogs and spend two hours hunting and thinking. The day, on the whole, has had something of a depressing effect upon me, but the out of doors and a little shooting soon set matters straight, and I am back at home shortly after dark. My wife and children leave me at seven o'clock to go to a school entertainment, and, left to myself, it occurs to me that it might be interesting to record the happenings of a rather typical medical day in S.C., the pleasures of constructive effort, the struggles against ignorance, the depressions that come from human woes, and the disconcerting contact with politics. I begin to write. At the end of a half hour, a few pages being done, the telephone rings and one of my intimate friends asks me to come to his house as soon as possible as he is in real trouble.

At eight o'clock I enter this home of culture and refinement, and I find my friend and his wife with looks of care upon their faces and in evident distress.

"Heyward," says my friend, "Little E., our five year old boy, developed a skin rash about two weeks ago. We thought at first that it was due to some quinine which we had given him, for other members of the family react peculiarly to quinine, and we paid little attention to it. But after it lasted so long, H. [his wife] became worried and took the child to Dr. W. The doctor took his blood and the next day told us that he had received a doubtful report of syphilis. He advised us to wait a week and have the test repeated. He took the blood day before yesterday and reports to us now that the test is positive. What in the world are we to do about it?"

Miss H. takes up the story in almost a tearful mood, tells of how well the child is in a general way, and how she cannot believe that the diagnosis is correct. They both ask if such a condition as the child has could be the result of inherited syphilis, and other questions pour out from them.

Before answering I ask that they let me telephone to Dr. W., get information in the matter from him, and ask his permission to talk to them. But I cannot get him on the phone, and I must decide between formal professional ethics and a desire to comfort my friends. With every care to protect Dr. W., I tell these people that the serological diagnosis should not be accepted until it had been substantiated by another laboratory. Assuring them that Dr. W. will welcome having this done, and promising to take it up with him in the morning, I retire from what I trust is my last tragedy of the day.

Returning home, I begin again to write the experience of the day, with this material to be added to my chronicle. At nine o'clock the telephone rings again and Dr. Fred Williams asks if he can see me. I tell him to come on down, wondering what could be bringing him out at such an hour. In a few minutes he rings the door bell, and I am surprised upon answering it to find him accompanied by Dr. George Benet. We retire to the sitting room and, as we take our seats, Dr. Benet says.

"Heyward, I am here on a peculiar mission. It is damned foolishness, I know, but I have just talked to C. in Baltimore where he has just been told that little C. is in a hopeless condition."

"My God, George," I exclaim, "Miss A. had led me to believe that the boy was getting along quite well. I judged from what she said that no evidence of metastasis from the growth had been found and that he was being X-Rayed simply as a precautionary measure. Man, you shock me!"

"Oh, no," says George, "he had metastasis in the lungs at the time that the testicle was removed. But that is neither here nor there. C. broke down over the telephone. He asked that I get in touch with you and Fred and find out if either of you could suggest any place that he could take the boy that might offer any hope. I know it is damned foolishness, but I have at least done what he asked!"

"No, George, I know of no place to take the boy.

I am sure that he is in the best possible hands at the present time. Boggs, Young, Waters and Burnham [Thomas R. Boggs, Hugh H. Young, Charles Waters, and—probably—Curtis F. Burnam] can do all that any one else can, but, of course, no one can do anything much under the circumstances. But I can't get over the shock that you have given me. Did C. and Miss A. go through this whole summer thinking that there were no metastases and that the boy really had a chance to get well? Of course, I realized that a sarcoma of the testicle was practically synonymous with death, but Miss A's. statements to me led me into joining her hopes that the tumor had been removed before any transfers had occurred and that the vigorous day treatments might destroy any tumor cells that were left in the tissues."

"Well," says George, "it is an interesting story. Young missed the whole thing at first. He insisted that the boy had a tuberculous testicle. But Franz recognized it from the first. He told me that it was none of his business, but that the professor was wrong and he was going to set him straight. He went right into Young's office and told him about it. Young then came out and said, 'Dr. Benet, it is a good thing that we keep this fellow Franz around here. You know, I am an incurable optimist while Franz is just as confirmed a pessimist. He may be right about this thing.' Of course Young was the authority that I went to see, so I accepted his opinion and telegraphed back that he said that the boy had a tuberculous testicle. That is how that report started. But the operation showed that he was wrong. They found a tumor which they had difficulty in classifying, some of them said that it was an inflammatory mass, but McCallum [William G. MacCallum] said that it was an invasive growth. Young's crowd took X-Ray pictures of all of the long bones and of the chest and claimed that no metastases were found. But a few weeks later, when Boggs took charge of the case, other pictures of the chest were made and unmistakable masses were seen in the lungs. Boggs then tried to see the pictures that had been made by Young, but those of the chest could not be found. He just out and said that Young had torn them up, for he was sure that the evidence of metastases were in them."

"George, that is a horrible story. I do not know when anything has depressed me so. This affair has really cast a damper over the community."

"Yes," says Fred, "this is a peculiarly sad situation. If I did not have a Board meeting tomorrow, I should take the train and go to C. This boy was one of those rare boys who are just what their father wants him to be. He had all of the physical size and strength that his father admired and he had brains with it, too. He had already chosen, on his own account, just the course to be a lawyer and a judge—and he would have, too, if this thing had not happened. It is just too distressing for words."

After a few more exchanges my guests departed—and I to bed, wondering, if I had to do it over again, whether I should choose clinical medicine as a life's work.

Editorials

JOHN C. HAWK

John C. Hawk, Jr., M. D. (May 21, 1918-March 7, 1999)

It is difficult to think of the South Carolina Medical Association over the past quarter century without thinking of John C. Hawk. It is therefore appropriate that we honor the memory of this giant of a man on our cover. He was an able spokesman for organized medicine at the county, state, and national levels. He brought his surgeon's zeal for meticulous detail to our bylaws and those of the AMA. He was always there and always smiling.

There have been many eulogies of Dr. Hawk since his death in March, and a brief biographical sketch is contained elsewhere in this issue. Chris Hawk tells me that none of the eulogies to date give adequate attention to his father's smile. It was not reserved for the public persona. It was shown to every patient who entered his examining room. John Hawk indeed embodied the ideal of the physician as an instrument of hope.

—CSB

AUTHORS WANTED!

This issue features a biographical sketch of Dr. J. Heyward Gibbes (1888-1962), accompanied by Gibbes's previously-unpublished account of a medical day in South Carolina. We can be sure that Gibbes would have disapproved. As a rugged individualist, he would not have welcomed the notoriety. As a physician-author, he would not have welcomed having most of an issue given to a single subject. Alas, our ability to publish his diary in full derived from our having a paucity of manuscripts awaiting publication.

The Journal of the South Carolina Medical Association began in 1905 as a forum for original observations and dialogue by and among the Palmetto State's practicing physicians. Physicians back then saw publishing as a way to enhance their reputations and—perhaps more importantly—support the ideal that medicine is a learned profession, not just another trade. Some years ago, I expressed the concern that growth of full-time medical faculties may have inhibited the desire and ability of practicing physicians to undertake medical scholarship. Today, I am concerned that socioeconomic trends symbolized by the rise of managed care further erode our collective self-image as a learned profession.

Hence my plea: Write it up! If you're unsure whether that project you've been putting off is appropriate for our journal, please ask! You can write or call our editorial office, or reach me by e-mail: cbryan@richmed.medpark.sc.edu. Let us hear from you!

—CSB

HEYWARD GIBBES, THE OSLERIAN TRADITION, AND THE IDENTITY OF INTERNAL MEDICINE

Medical specialities in the United States arose from the context of general practice. During the 19th Century more and more generalist physicians began to limit their work to one area or another. Some generalists achieved new identities as dermatologists, surgeons, neurologists, obstetricians, gynecologists, pediatricians, or psychiatrists. Others achieved identities as consultants to their fellow generalists on difficult cases. Consultant status was based on hard-earned reputation. Consultations put egos on the line, since by definition they reflected one generalist's need to seek another's help. Early codes of medical ethics, such as that adopted by the AMA, had a great deal to say about the etiquette of consultations.The referring physician would present the case to the consulting physician; the two would discuss the case outside the patient's presence; the referring physician would then present the conclusions; and rules governed what would happen when the doctors disagreed. A good consultant needed knowledge, skill, and considerable tact.

It was against this background that Internal Medicine was organized largely as a consulting specialty. Its origins are popularly if somewhat erroneously identified with the personage of William Osler, whose great textbook, *The Principles and Practice of Medicine* (1892), established his reputation as the leading generalist physician of his era. In retrospect, Osler is emblematic of the great consultants of his era. In 1885 some of these men (for they were all men back then) met to form the Association of American Physicians, an organization dedicated to scientific medicine to the exclusion of politics. They consciously espoused the German mechanistic model of disease, known then as *innere Medizin* and now as "the biomedical model." Good medical practice, they felt, would increasingly be based on the biochemistry and physiology of the internal organs. The term "Oslerian tradition" is sometimes used to designate the ideal of the broadly-knowledgeable generalist-consultant exemplified by Osler and his colleagues.[1]

James Heyward Gibbes was a notable exemplar of the Oslerian tradition understood in this way. Although Osler had left Baltimore before Gibbes entered medical school at Johns Hopkins—Gibbes saw Osler but once and could not remember a word Osler had to say—he was taught by the heirs to Osler's mantle. Highly principled and self-disciplined, Gibbes embraced the ideal of the consultant as understood by previous generations. Thus the late Dr. Charles R. Holmes recalled that he once asked Gibbes for a consultation in a case of fever of unknown origin referred to him by another physician. After Gibbes had finished his examination, the family asked for his opinion. He replied that he would give his opinion only to Dr. Holmes. Gibbes refused to be tainted by the familiar mot that "a consultant is someone who doesn't answer the question and steals your patient."

The historian Rosemary Stevens has characterized Internal Medicine as a field singularly characterized by institutional importance and definitional ambivalence.[2-3] On the one hand, Internal Medicine has prospered during the twentieth century to the extent that it is now the largest of all medical specialities. On the other hand, Internal Medicine exists as such only because it is organized, for its turf boundaries are by no means clear-cut. Internal Medicine now faces challenges from opposite directions. Its own subspecialists have to a large extent taken over the internist's hereditary role of consultant. Certain of the subspecialities—most notably cardiology and oncology—now threaten to break off from the mother tree. Other primary care specialties—most notably Family Medicine but also Emergency Medicine and Preventive Medicine—have arisen to challenge the internist's acquired role of primary care provider. These tensions are traceable to the origins of Internal Medicine. Heyward Gibbes knew them well.

In 1915, not long after his return to South Carolina, Gibbes read a paper at the annual SCMA meeting in Greenwood. He said:

> Internal Medicine is now, as it always has been, the broadest field of special endeavor in clinical medicine. Its definition and delimitation of its field of activity have never been satisfactorily expressed. . . . In 1897 Dr. Osler said of Internal Medicine: "Not itself a specialty (though it embraces at least half a dozen), its cultivators cannot be called specialists, but bear

> without reproach the good old name physician, in contradistinction to general practitioners, surgeons, obstetricians, and gynecologists." While this statement is no less true today than at the time it was spoken, the general practitioners and specialists upon whose many borders Internal Medicine so nearly encroaches, may in all justice demand a more specific statement of the relation of the internist."[4]

He acknowledged that it was not fair for general practitioners to "expect to find co-operation at the hands of the internist and to encounter competition in its stead." In another paper, he conceded that "no terse definition of Internal Medicine has ever been given, and it is probable that none can be had."[5]

Gibbes, like Osler, expressed great admiration for the family physicians, "the sturdy type of warrior" on the front line of medical practice. Yet Gibbes opposed the AMA's recommendation that family physicians carry out annual physical examinations:

> The merit of the general practitioner continues to be the solid rock on which respect for the medical profession is founded. . . . But I have some doubt whether the tremendous demands upon his time, his habits of work and his habits of thought, and the discursiveness of his occupation do not to a large extent disqualify him for the time-consuming and detailed type of examination that has been outlined as necessary for a periodic health examination.[6]

Typical of his era, Gibbes thus perceived Internal Medicine as a specialty that stressed depth rather than breadth or—put baldly—as an elite form of generalism.

Elitism does not sit well with most Americans. It was only natural that Gibbes, like other internist-consultants, would be resented at least to some extent by his contemporaries. A bitter yet comical exchange took place at the 1932 annual meeting between Gibbes and J. Adams Hayne, South Carolina's health officer. Colorful, opinionated, bombastic, articulate, yet less-well-educated than Heyward Gibbes, Hayne toyed with Gibbes when the latter defended Osler's reputation at an SCMA meeting:

> *Gibbes*: Anyone, I think, who has the temerity to compare Dr. Osler, in an unfavorable light, with any other physician of modern times is brave indeed. To speak of Dr. Osler as a great absorber, and leave the matter there, is, it seems to me, a terrible injustice to a memory that we all revere. Not only was Dr. Osler a great absorber, but a great research worker, a great thinker, and, above everything else, a great inspirer of medical men."[7]
>
> *Hayne*: I rise to a point of personal privilege. Dr. Osler was known at college as "Sticky," because everything anyone said stuck to him, and he usually repeated it."

Hayne would not let it go. After concluding a paper on pellagra in the United States during which he mentioned both Osler and Sir Patrick Manson, he said: "Dr. Osler was a great absorber, but Dr. Manson was a great thinker."[8] Despite the reservations of Hayne and others like him, Internal Medicine prospered.

At the time of Gibbes's death in 1962, Internal Medicine and its relationship to general practice were changing rapidly. America's postwar prosperity led to huge budgets at the National Institutes of Health, which fueled not only research but also full-time professorships and fellowships in Internal Medicine's subspecialities. Subspecialization appealed to a large majority of the graduates of Internal Medicine residency programs. Entering practice, these graduates increasingly identified themselves not as internists but rather as subspecialists—as cardiologists or gastroenterologists, pulmonologists or rheumatologists. Internists held onto their acquired identity as primary care providers, but the effort often seemed to be half-hearted.

Americans rejoiced in the new medical technology but were not entirely happy. They pined for the old-time general practitioner, who seemed to be vanishing from the landscape. General practitioners responded. They asked the American Board of Internal Medicine to design a certifying examination for them, but were turned down. In 1969 they formed the American Academy of Family Practice. To their lasting credit they became the first medical specialty to insist on recertification. Their leaders (many of whom had trained as internists or as pediatricians) rightly pointed out that the biomedical model of disease—*innere Medizin*—inadequately explained a large fraction of the symptoms lurking in doctors' waiting rooms. They proposed an alternative and called it the biopsychosocial model. Family Medicine gained appeal among third-party payers as a more cost-effective style of practice.

For some time I (like many others) have struggled over the relationship between general Internal Medicine and Family Medicine. How should these specialties relate to one another? Should they go their separate ways? Or should they try to find common ground?

In my opinion, the leaders of Internal Medicine and Family Medicine should work hard to find common ground.[9] Both specialties offer primary care for adults (some of my colleagues in Family Medicine tell me that up to 90 percent of their practices consist of adult medical care similar to that given by internists). Many general internists are now becoming "hospitalists," a movement that could eventually make it difficult for family physicians (and most others physicians, for that matter) to take care of sicker patients in the hospital setting. On the other hand, nurse practitioners are increasingly becoming more-or-less independent primary care providers. Some observers suggest that neither general Internal Medicine nor Family medicine will remain viable much longer, since the dominant style of practice will consist of midlevel practitioners referring patients selectively to procedurists and super-specialists.

I believe that training in the primary care disciplines needs to become more flexible. Training modules borrowed from Internal Medicine, Family Medicine, Pediatrics, Emergency Medicine, nonoperative Gynecology, Orthopedics, and other disciplines would not only prepare young physicians for specific niches but also provide necessary nourishment for seasoned physicians whose careers need reorientation. Finding common ground and flexibility could quite possibly result in the evolution of Departments of Primary Care, accelerating the trend for medical subspecialists to forge alliances with their surgical counterparts. Should that come to pass, so be it. Osler, I suspect, would have approved.

—CSB

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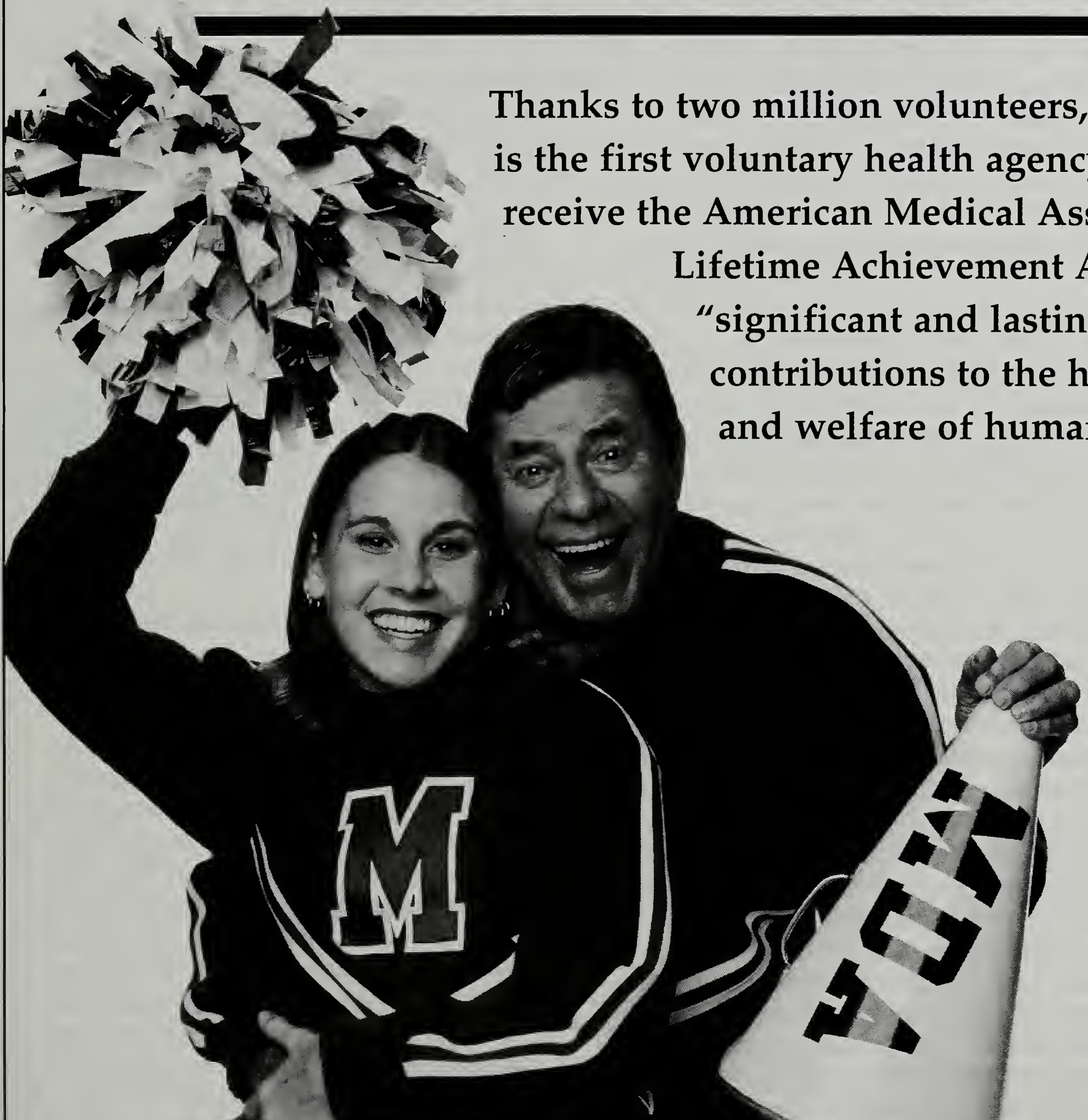

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Letters to the Editor

Dear Sir:

As board certified allergists, we strongly disagree with statements made in the article "Current Therapy for Chronic Rhinitis" by Gregory S. Parsons, M. D., which appeared in the December 1998 issue of *The Journal.* Dr. Parsons writes that, "in vitro tests are performed on serum, and when performed by a quality lab, are now the equivalent of skin testing." Multiple references (1-5) suggest that in vivo skin tests are superior to in vitro tests in the diagnosis of allergic diseases including rhinitis. It is difficult to determine which labs perform high quality in vitro allergy tests[1,2]. In the setting of managed care, it is often cost rather than quality which determines which labs are allowed under a given patient's medical coverage. Recent practice parameters published by a joint panel of the American Academy of Allergy, Asthma, and Immunology and the American College of Allergy, Asthma, and Immunology state, "the precise sensitivity of these immunoassays (in vitro tests) compared with prick/puncture skin tests has been reported to range from less than 50 percent to greater than 90 percent, with the average being about 70 percent to 75 percent for most studies. Skin tests are therefore the preferred tests for the diagnosis of IgE-mediated disease."[3]

Dr. Parsons' article speaks of the benefits of skin end point testing in the diagnosis of allergic rhinitis. This technique employs multiple series of intracutaneous skin tests, an expensive and uncomfortable technique that provides little additional information compared to traditional prick/puncture skin tests in the diagnosis of allergic rhinitis. Recent practice parameters discuss serial end point titration under the section "Tests that are Valid as Diagnostic Allergy Tests but Inappropriate for General Clinical Use." The parameters state, "when used for diagnosis of atopic respiratory disease, it provides a degree of precision that most allergists fell is unnecessary in ordinary clinical practice."[3]

We feel that it is important for readers to understand discrepancies between the usual diagnosis of allergy in the hands of board certified allergists and the techniques promoted in "Current Therapy for Chronic Rhinitis."

Andrew Davidson, M. D.
Thomas Harper, M. D.
Bruce Ball, M. D.
P.O. Box 1555
Mt. Pleasant, SC 29465

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2. Allergy Testing: In vivo versus in vitro testing, Ownby, D. M. D., Pediatr Clin North A., 35 (5) : 1007, 1988.
3. Practice Parameters for Allergy Diagnostic Testing, Annals of Allergy, Asthma, and Immunology, December (part II), 554-625, 1995.
4. In Vivo Methods for Study of Allergy. Bousquet J, Michael FB, In: Middleton E Jr, Reed CE, Ellie EF, eds. 4th ed. St. Louis: Mosby Year Book. 573, 1993.
5. Use and Interpretation of Diagnostic Immunologic Laboratory Tests. Lopez M, Fleisher T, Deshazo RD, JAMA 268: 2970-90, 1992.

The above letter was forwarded on to the author and the following is the response:

Dear Sir:

I am perplexed by the letter from the board certified allergists to *The Journal*, and Gregory Parsons, M. D., who wrote "Current Therapy for Chronic Rhinitis" in the December 1998 issue. The letter's older references on in-vitro tests for inhalant sensitivities ignores the constant flux of method refinements. Such makes about as much sense as comparing the capabilities of MRI even five years ago to the current "rapid sequence" technology that can quantitate calcification within the coronary arteries. In 1998, "In-Vitro and Skin Testing for Allergy: Comparable Clinical Utility and Costs" (Am J Man Car 4:969-985) concluded that the "recent scientific literature indicates that in-vitro and skin testing are highly correlated," and that it is not now possible "to determine which test is more accurate." I personally favor skin testing as it is less expensive (albeit, slightly more painful) than in vitro testing, but note the utility of in vitro "screens" in confirming allergic rhinitis patients tentatively identified by history and physical examination. A "screen" of eight geographically adjusted inhalant allergens can identify, with 96 percent efficiency and 94 percent sensitivity, those who would benefit from a more comprehensive (and expensive) allergy workup.

I am not sure what to make of "it is so difficult to determine which labs preform high quality invitro tests," as such would seem no more, or less, difficult than determining which specialist performs high quality skin tests for allergies. Most primary care physicians seems quite adept at determining for themselves which labs and/or physicians deliver quality services to their patients.

It is true that intracutaneous skin testing, a common technique among otolaryngologists, involves more skin punctures than does traditional prick testing, but in our current medical reimbursement environment it is usually no more expensive, as the specialist is commonly reimbursed one lump sum for all skin tests. It is a matter of opinion, on which honest practitioners can disagree, as to whether the higher degree of precision offered by multiple intracutaneous skin tests is advantageous in clinical practice.

In the past few years, the national allergy/immunology and the otolaryngology organizations have cooperated on many issues, and ceased commenting on technique differences. Diminution of the internecine rivalry began with the Council of Scientific Affairs of the AMA in 1986, which affirmed that "skin test end point titration provides a useful and effective measure of patient sensitivity" and even then acknowledged the efficacy of the relatively crude in-vitro tests (JAMA 258:1363-1367, 1987; 258:1639-1643, 1987). As evidence of this interspecialty reproachment, the American Academy of Otolaryngology-Head and Neck Surgery in 1996 published "Allergic Rhinitis: Clinical Practice Guidelines" (Otolaryngol Head Neck Surg 115:115-122), which specifically acknowledged the validity of skin prick testing. In 1998, the Joint Task Force on Practice Parameters in Allergy, Asthma and Immunology (sponsored by the national allergy/immunology organizations) issued "Diagnosis and Management of Rhinitis" (Ann Allergy Asthma Immunol 81:478-518) that concluded "the demonstration of specific IgE antibodies to known allergens by skin testing or in vitro tests is of particular importance in determining whether the patient has allergic rhinitis and for identifying specific allergens."

Just a few months ago, Medicare reimbursement issues relative to immunotherapy were addressed jointly by Allergy/Immunology and Otolaryngology representatives in testimony before the federal Health Care and Financing Administration. That joint effort continues, and has a distinctly South Carolina flavor, given that the SCMA President, Dr. Imbeau, represents one of the general allergy groups at the AMA, and I, one of the otolaryngology groups, Given (at last) specialty cooperation in a joint "allergy caucus" at the AMA, the AMA is supporting our mutual efforts. I do hope such cooperation extends to the local level.

J. David Osguthorpe, M. D.
Dept. of Otolaryngology and
Communicative Sciences
171 Ashley Ave.
Charleston, SC 29425-2242

Dear Sir:

I just finished reading Dr. William Pittard's article on Medicaid managed care in the January 1999 issue of *The Journal of the South Carolina Medical Association* and as a Family Practice physician in Seneca, I have these comments about our state's Medicaid program.

While the goals of improving access to care and continuity of care to Medicaid recipients are admirable, managed care, no matter how you define it, does not address what I perceive as Medicaid's biggest problem: recipient attitude. Most of the adults on Medicaid that I have treated seem to feel that they deserve the best medicine has to offer without having to accept any responsibility for their own health. As a group, they are the most demanding, non-compliant, resource-draining, irresponsible patients I have encountered. In addition to seeing Medicaid patients in my office, I also volunteer in our local "free clinic" for people with limited incomes who have no health care coverage. I would rather see the patients in the free clinic because in general, they are much more appreciative of the help and more willing to work towards their health. Instead of shifting the financial responsibility for following preventative medicine guidelines from the state to the physicians with the HMO system, we need to be shifting the responsibility to the recipients themselves. As long as it costs a Medicaid recipient with a common cold less money to be seen in an Emergency Department and get a prescription than it does to go the drugstore and get a bottle of cough syrup, the problem with attitude will persist.

Jaymi S. Meyers, M. D.
Keowee Family Medicine
102 Omni Dr., Suite B
Seneca, SC 29672

The following 84-word poem is, according to the author, a parody concerning our "little recent progress in defining our fuzzy concepts of consciousness, awareness, personhood, and humanness." The author points out that some of these qualities must begin in the fetus as neurons begin to multiply, correlating with myelinization and synaptic development (bouton terminaux).

The author points out that "since some modern deliveries are done with the mother sitting in a jacuzzi, the first words that this child might hear would be those of the obstetrician (Quincy) asking for scissors to cut the cord."

—CSB

Born in a Turquoise Jacuzzi

Now that functional MR can tell the age of any
thought, picture my unsolicited push from a urine-filled,
black sack into this endless, reddening tub.
My third idea was mom's huge foot.
The place got pinker, heartbeats fainter. Could I have
more thoughts, please? Reflexes are boring, but ideas
can initiate the flow in my boutons terminaux.
Twenty-five thoughts equal consciousness but thirty-five mean
sapience, or even personhood. Thought number forty was why
"...pass the scissors to Quincy?"

Edward V. Spudis, M. D.
1215 Yorkshire Rd.
Winston-Salem, MC 27106

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On the Cover:

JOHN CHRISMAN HAWK, JR., M. D. (MAY 21, 1918 - MARCH 7, 1999)

A major contributor to the efforts of organized medicine on local, state and national levels, Dr. John Hawk began his involvement in the 1960s. He served as South Carolina delegate to the American Medical Association for 25 years. In a flyer promoting his candidacy for AMA Board of Trustees his platform promoted "A HAWK for the Practice of Private Medicine." The profile states "John Hawk is recognized for being radical when necessary in cancer surgery, but conservative in the medicopolitical arena. . . ."

On the state level, Dr. Hawk was active in the House of Delegates before serving as Vice President of the South Carolina Medical Association in 1965-66 and President of the Association in 1978-79. In addition he was actively involved in both the local and state organizations of the American Cancer Society.

On the local level, his service to medicine included president of the Roper Hospital Staff in 1972 and President of the Charleston County Medical Society in 1965-66. His service to the latter continued as a member of its Executive Committee. He also found time for active membership in The Robert Wilson Medical History Club, and the Waring Library Society of which he was both a Charter and Life member. The list of his non-medical activities is almost as long. They include the Presbyterian Church of which he was a deacon and elder and involved locally and nationally, the Charleston County School Board, Junior Achievement, and the South Carolina Historical Society.

Dr. Hawk's list of achievements would never be complete without mention of his and his wife's accomplishment of providing the next generation with nine fine adults and nomination by his friends and patients from St. George, SC for the Order of the Palmetto which was awarded to him in 1991.

Also in 1991, on the occasion of Dr. Hawk's retirement from active practice of surgery, The Rev. Dr. Charles Robert Tapp, President Emeritus of the Presbyterian Home of South Carolina, had this to say about John Hawk in a letter to the editor: "Dr. Hawk's ministry in medicine will forever remain an example for generations of those who will follow him, and will forever abide in the hearts of his patients who loved him and arise to 'call him blessed.' "

Jane McCutchen Brown, Curator
Waring Historical Library

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Alliance Page

INAUGURAL ADDRESS TO THE SOUTH CAROLINA MEDICAL ASSOCIATION ALLIANCE HOUSE OF DELEGATES

April 30, 1999

"Time past and time future allow but a little consciousness." T. S. Eliot's words reach out to us as we contemplate the millennium.

Come be a time traveler with me—we go back 1000 years to a time when few people could write their names, read a sentence or realize the significance of a date on the calendar. The year is 999. The world population is 300 million and average life expectancy is barely 30. Europe is emerging from the Dark Ages where the usual practice of medicine consists of domestic applications of sorcery, charms, and old wives' remedies. "For a headache, take willow, add oil, reduce to ashes, work to a viscid substance, add to this hemlock, carbine, and red nettle, pound them together-bathe therewith." Sounds like a great cure for a hangover or a treatment at the Golden Door Spa!

Meanwhile, as we travel to the Eastern world, intellectual illumination is a little brighter. At the dawn of the millennium, Persians are studying translations of the early Greek scientific texts; they are discovering theories of Hippocrates that emphasize scientific reasoning instead of mysticism and superstition. This enlightenment enables Ibn-Sina, the Persian physician and philosopher, to determine that tuberculosis is contagious. His *Cannon of Medicine* becomes a medical text for over 600 years.

As time travelers, we are not prisoners of time. We will move from the year 1000 and observe vast changes in medicine during our journey. We will witness how the medical pioneers built on the knowledge of Greek scientific literature. The pure message of the Hellenic texts is "heal the sick and relieve human suffering." A quote from *Precepts* in the Hippocrates Corpus gives it a voice: "Where there is love of human kind, there is also the love of the art of medicine." Using this devotion as a vehicle we move toward ***2000 and Healthy Lives for the Millennium***.

Slide show begins (artwork provided by children of Florence County Medical Alliance Members)

1000— European townspeople found hospitals for sick and aging.
1100— Universities start medical schools.
1268— Roger Bacon publishes works on improving sight with eyeglasses.
1348— Black Death kills one-third of Europe's population; doctors begin dissecting human bodies leading to rise of scientific method.
1401— Nuremberg wives arrange feeding, clothing, and shelter of lepers.
1455— *Gutenburg Bible*, first moveable type, allows medical texts to be printed.
1535— Europeans introduced to tobacco.
1543— Vesalius describes, through dissection, correct human anatomy.
1628— William Harvey explains circulatory system.
1674— Leeuwenhoek observes bacteria through a microscope.
1796— Edward Jenner administers first effective vaccination.

1842-46— Crawford Long and William Morton use ether as anesthetic.
1854— Florence Nightingale applies revolutionary nursing practices.
1858— Virchow discovers disease, even life, begins at cellular level.
1862-82— Pasteur and Koch prove certain bacteria cause specific diseases.
1866— Mendel proposes basis laws of heredity.
1867— Joseph Lister introduces antiseptic methods to surgery; Lister and his wife work side-by-side in their kitchen laboratory.
1895— Wilhelm Roentgen discovers X-rays.
1898— Marie and Pierre Curie discover radium.
1900— Freud publishes *Interpretation of Dreams.*
1922— AMA Auxiliary founded in St. Louis.
1923— SCMA Auxiliary founded in Charleston.
1928— Fleming identifies penicillin.
1931— SCMA Auxiliary starts medical student loan program.
1953— Watson and Crick decipher structure of DNA.
1958— SCMA Auxiliary begins funding American Medical Association-Education and Research Foundation (AMA-ERF).
1967— Cicely Saunders establishes St. Christopher's first modern hospice.
1967— Christaan Barnard performs first heart transplant.
1985— Gallo and Montagnier identify the AIDS virus.
1996— Ian Wilmut clones the first adult mammal, Dolly the Sheep
1999— SCMA Alliance Annual Meeting, April 30, 1999

Slide Show ends

One thousand years have passed and the world population has grown form 300 million to over six billion. Global life expectancy is 62 and in the United States, it is 76. Generation after generation of steadily increasing scientific knowledge has brought us miraculous ways to care for the sick and dying. Our pledge is that progress will continue into the next millennium. Many organizations are in place to insure that the body of knowledge grows, but none are as unique as the medical alliance. The love alliance members feel for their physicians spouses naturally extends to love for all human beings. Supporting and promoting programs like SAVE (Stop America's Violence Everywhere), AMA Foundation, and Pregnant Pause is a genuine extension of that emotion. The conviction that the medical alliance will stand the scrutiny of time should bring members to the highest level of determination.

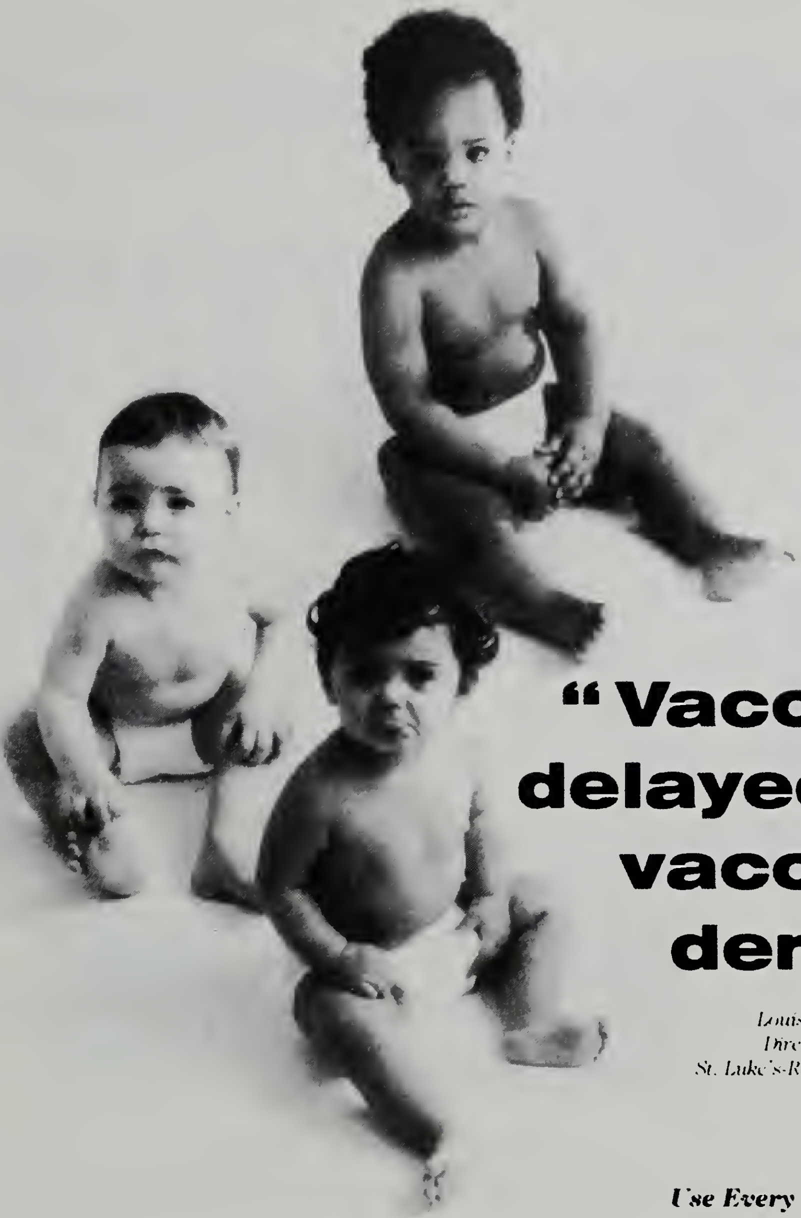
Remember the townspeople in 1000, founding hospitals; the Nuremberg wives in 1400, tending lepers; Lister and his wife, in 1867, toiling in their kitchen lab; and in 1999, Alexis Alia challenging us to raise money for medical scholarships. These people inspire us to fulfill our role.

Whether it is giving blood, signing an organ donor card, raising funds for medical research, or distributing Pregnant Pause booklets on Doctors Day 2000, we are determined to make the next millennium count.

As Eliot challenged, "Be remembered; involved with the past and the future. Only through time is time conquered."

Remember the Future—Be a Part

Shirley Meiere (Mrs. Cheney M.)
1999-2000 SCMAA President



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There have been substantial decreases in premiums for term life insurance recently. Premiums today may be lower than they were just one or two years ago. If you have term insurance, you should take advantage of these lower premiums. Due to new legislation, these premiums may not be available much longer.

New term insurance legislation (Regulation XXX) will be effective January 1, 2000. This legislation will negatively affect the price of term insurance purchased after its effective date. Regulation XXX has been pending for a number of years and was first planned to be effective on January 1, 1996.

When that effective date didn't happen, the assumed effective date was rolled forward; first to 1997, then to 1998, 1999 and finally 2000. Recent adoptions make the year 2000 effective date concrete. As the effective date rolled forward, companies fought for market share by continuously reducing premiums. The decrease in premiums really accelerated in 1998 and 1999.

The companies also began offering term policies with level premiums lasting many years. Policies with level premiums for 10, 15, 20, 25, and even 30 years are now available. Premiums have decreased so much that premiums for 20-year term today are about what they were for 10-year term only a few years ago.

Companies also developed more underwriting classes. At the beginning of the decade, insureds were classified either as "smokers" or "non-smokers". Most companies today offer at least "standard" and "preferred" risk classes while some also offer a "preferred-plus" class.

The insured must be healthy to qualify for any of these classes. The requirements are more stringent to qualify for preferred rather than standard and even more so to qualify for preferred-plus. Estimates are that approximately 50% of healthy applicants will qualify as standard, 35% as preferred, and 15% as preferred-plus.

The following premiums serve as guidelines for the various risk classes. They are examples only and do not represent any one company's products. Premiums are for $1,000,000 of 20-Year Term for an insured who has not used tobacco for at least 3 years:

UNDERWRITING CLASS	*Age 40*	*Age 50*	*Age 60*
Standard	$1,600	$3,300	$8,200
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Preferred Plus	$900	$2,200	$5,400

These premiums clearly demonstrate the importance of being in the best risk class for which you qualify. Underwriting decisions vary, so an applicant who is a standard risk with one company may very well qualify as a preferred risk with another.

The advice of a knowledgeable agent who is familiar with the underwriting practices of various companies is vital to help you through this maze. Be aware that the company with the lowest premium does not necessarily offer the best value. There are many factors other than price that you should consider.

Regulation XXX will have a negative impact on the pricing and features of term policies purchased after its effective date. These higher premiums and/or shorter guarantees make today the best time to re-evaluate your term life insurance needs. Your window of opportunity may be very short.

Views expressed herein are those of the authors and in no way represent SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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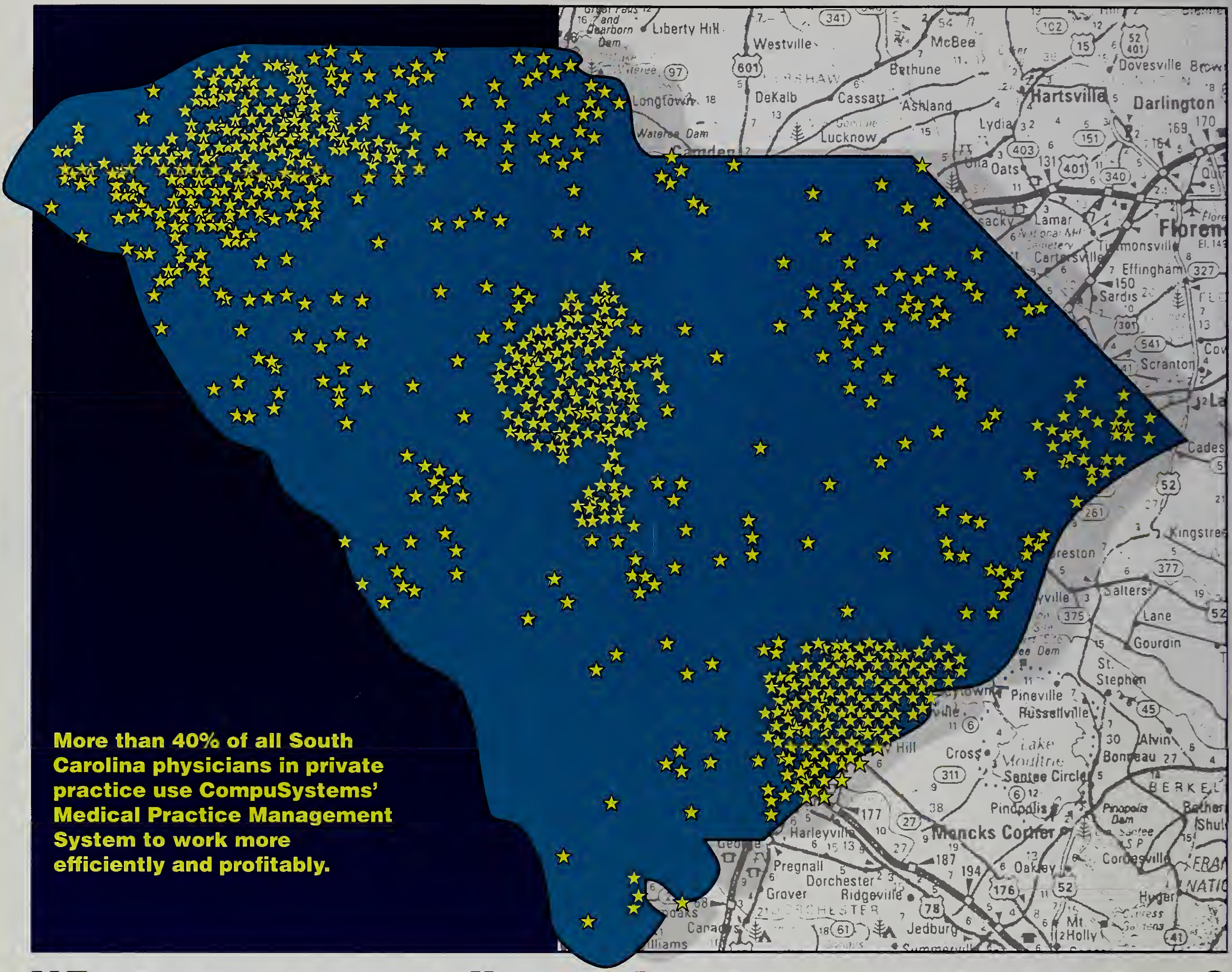

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OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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FIRE ANTS: A CONTINUING COMMUNITY HEALTH THREAT

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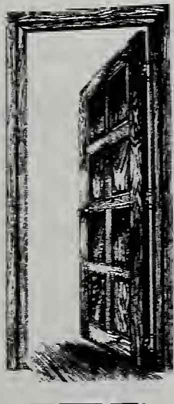

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For more information on how to register, call **800 626-3211** and **ask for the Department of Organized Medical Staff Services** or e-mail us at **omss@ama-assn.org**.

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President's Page

MENTOR *NOW* TO THE PHYSICIANS OF *TOMORROW*

At the Annual Meeting, your Board of Trustees met with the medical student leadership and had a full and serious discussion with them concerning their future in organized medicine. Under the very fine leadership of our secretary, Dr. Richard Ulmer of Charleston, we have moved into a position of assistance to the students in a variety of their needs. At the board meeting, plans were made to move forward with the development of a Medical Student Section of the SCMA House of Delegates, and the associated seat on the board. This action will require changes that our Constitution and Bylaws Committee will start to work on in their next meeting, and it will be brought up for discussion and consideration to the House of Delegates at our meeting in 2000. I urge your support of this when discussions take place.

Medical student leadership is very strong at both of our medical schools. Dean McCurdy and Dean Faulkner would echo this statement in a heartbeat. We have great young physicians coming to take our place. Just ask Dr. March Seabrook, Chairman of the SCMA Foundation. Over the last three years, he has had the opportunity to interview students from both of our schools for the Scholarship Committee and he is keenly aware of their quality.

Your SCMA Foundation gave a record $56,000 in scholarships to deserving students this year! Even with this outstanding accomplishment, many student applicants—very deserving applicants—had to do without awards. The need is great my friends, and with a little extra effort, we can provide more next year. I challenge each county medical society and each medical staff to look at the possibility of providing scholarships for students from your hometown or your county! The Foundation will help you write the guidelines.

We all have a responsibility to our students. They are tomorrow! We should be looking in our communities for outstanding high school students who have the ability—they may only need the encouragement that you can give them. Become a mentor for a young person. Talk with their family and encourage them also. So many young people never go to college because no one ever told them they could—no one told them they ***should***! No one said, "You can do it!" We must become a catalyst for these young men and women—this is what mentoring is all about. You and I are role models, like it or not. If we are good at it, mentoring is a piece of cake!

Lastly for this issue, let me ask you to take on yet another responsibility. The responsibility to speak up positively for our profession. When you hear a colleague say something to the effect that he or she would not encourage anyone to go into medicine today, tell then to wait just a minute. Challenge them to think about those patients that make us smile—or those that bring us homemade cookies or plants for our yards. Think of those who put on their Sunday-best just to look good for us. Think of the hundreds of tears—no thousands of tears—you have stopped by just being there when it counts. Challenge them to think that they are important to so many people every single day! Then see if they still feel the same.

Come back next month.

William H. Hester, M. D.
President

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SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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June 1999

MEDICAID UPDATE

EPSDT Reminder

Effective with dates of service on and after December 1, 1998, DHHS implemented changes regarding Early and Periodic Screening Diagnosis and Treatment (EPSDT). This is the preventive, well-child screening program for South Carolina Medicaid. Reimbursement for EPSDT services is now filed on the HCFA 1500 claim form. The 1724 form for billing EPSDT will not be accepted after June 30, 1999. After this date, all EPSDT services must be filed on the HCFA 1500 claim form and providers will be responsible for scheduling screenings and immunizations. The DSS county offices will continue to be available to schedule transportation services and assist in referrals to other professionals. Please be aware that Medicaid's supply of the 1724 form has diminished; to spare unnecessary costs of printing, there are no plans to replenish the supply. Once the supply of the 1724 is depleted, the 1500 must be used. **EPSDT services within one year of the date of service are now accepted on the 1500 claim form.**

DHHS Has New Telephone and Fax Numbers

Physician Services Telephone	(803) 898-2660
Physician Services Fax	(803) 898-2523
Hospital Services	(803) 898-2665
EPSDT	(803) 898-2660
DME Equipment & Pharmacy	(803) 898-2530
Provider Enrollment	(803) 788-7622, ext. 41650

New Medicaid Physicians Provider Manual

DHHS is excited to announce that the 1999 edition of the *Physicians Provider Manual* is at the printer. The new edition will be sent to all enrolled providers.

MEDICARE UPDATE

Provider Enrollment Open House

Do you have a problem completing the HCFA-855 enrollment form? Would you like help completing the HCFA-855? Come to Palmetto Government Benefits Administrators' popular Medicare Part B Provider Enrollment Open House. You do not have to register and there is no fee. Just show up and they will assist you!

When: July 6, 1999; August 3, 1999

Where: Medicare Part B
Palmetto GBA, LLC
ParcOne
10261 Two Notch Road
Columbia, SC 29229

This is an all day open house starting at 9 a.m. on the date listed above. Come and receive the help you want. Please see the May 1999 *Medicare Advisory* for detailed directions to the workshop location. You may contact the Medicare Customer Service Department at (803) 788-5568 for additional information.

Waiver of Beneficiary Coinsurance and Deductible

Providers may accept a lesser amount than their usual charge if they determine a Medicare beneficiary is indigent. If a provider determines that a beneficiary is indigent, the beneficiary does not have to pay coinsurance or deductibles. However, failure to collect coinsurance and deductibles from the majority of patients on the grounds of indigence constitutes a reduction of the provider's actual charge, unless reasonable collection efforts are made.

The provider must determine the patient's indigence. The patient may not determine indigence. The provider must ask if the patient has any other source that is legally responsible for the patient's medical bill. Follow the same collection procedures for all patients, whether they are Medicare beneficiaries or not. If you do not make a reasonable effort to collect deductibles and coinsurance from Medicare patients and routinely waive Medicare deductible and coinsurance amounts, you are in violation of your assignment agreement.

If the cost of billing and/or collecting the coinsurance/

(see Medicare, page 3)

INDEPENDENT MEDICAL EVALUATIONS FOR WORKERS' COMPENSATION

The SCMA Occupational Medicine Committee has developed the following recommendation for independent medical evaluations for South Carolina's Workers' Compensation Commission. The SCMA House of Delegates voted during their May 2, 1999, meeting to approve the guidelines that follow below:

Independent Medical Evaluations for South Carolina Workers' Compensation

Recommended items to address when performing an Independent Medical Evaluation:

1. Patient's name, date of birth, social security number, case number.
2. Date and description of injury; job title or description (if known).
3. Current symptoms of the patient.
4. Opinion whether the reported injury probably caused the symptoms.
5. Known medical or surgical treatment, physical therapy and other treatment to date.
6. Past medical history, educational and job history, previous work comp injury history.
7. Physical examination of body parts affected.
8. Specify other reports, (including x-ray) that physician relied on for his/her determination.
9. The need for any further therapy (i.e. is the patient at maximum medical improvement?).
10. The existence and amount of any permanent impairment, per body part injured.
11. The reason for any impairment, and the impairment guidelines used. It is recommended that impairment ratings be guided by the most current edition of the *AMA Guides to Evaluation of Permanent Impairment* (including which chapter or model was used to arrive at the impairment). Other nationally physician-recognized guides may be used, if scientifically validated and approved by the Occupational Medicine Committee of the South Carolina Medical Association.
12. Reason for any substantial deviation from the guidelines.

If you need more information or have any questions regarding workers' compensation, please contact Kelly Danias, SCMA Director of Governmental and Public Health Affairs, (800) 327-1021 or (803) 798-6207, extension 236.

AMA Y2K BOOKS

If you need help assessing your readiness for the Year 2000, take advantage of this offer. You can obtain a free copy of the American Medical Association's book, The Year 2000 Problem: Guidelines for Protecting Your Patients and Practice, simply by calling the Member Services Division of the SCMA. This book outlines the liabilities associated with the Y2K bug and how noncompliance may affect your practice. *For more information, contact Christy Hogue at (800) 327-1021, extension 221.*

PHYSICIANS CARE NETWORK UPDATE

Currently, there are 8,182 participating physician locations, 889 participating ancillary locations and 96 participating hospitals. PCN has 114 contracted groups with 62,871 covered lives. We will continue to provide information as contracts are received.

NEW GROUPS:
- Ameristar Mortgage; Greenville; effective 5/1/99
- Kaleidoscope Embroidery; Woodruff; effective 5/1/99
- Jones & Hendrix; Spartanburg; effective 5/1/99
- Lang Meckre; Ridgeway; effective 7/1/99
- Grand Strand Healthcare; Myrtle Beach; effective 7/1/99
- Central Reserve Life; effective 5/1/99
- Community Newspaper; Marion; effective 5/1/99

TERMINATIONS:
- Ray Walker; effective 6/1/99
- Mutual Assurance; effective 5/1/99
- Ideal Promotions; effective 5/1/99
- Francis Marion; effective 6/1/99
- Crisp Hughes Evans; effective 6/1/99

Note: Please send all claims for The Provident members who access the PCN network to the following PCN claims address: ***PCN; 103 S. Pine Street, Spartanburg, SC 29302***

If you have questions about PCN, please contact Judy Legg, Network Coordinator, PCN at (803) 798-6207, extension 257 or statewide at 1-800-327-1021. You can also send an e-mail message to judy@scmanet.org.

(Medicare, continued from page 1)

deductibles for a particular service exceeds or is disproportionate to the amounts to be collected, it will not be considered a reduction of the actual charge.

Unallowable Waivers
If you routinely and consistently waive coinsurance and deductibles from or on behalf of Medicare beneficiaries, PGBA will notify you in writing regarding the determination you have made, the basis for that determination, and that the billing practice may be a violation of sections 1128A and 1128B of the Social Security Act pertaining to false claims and kickbacks. If notified, you have 30 days to dispute the determination or to offer an explanation.

Nurse Practitioner, Physician Assistants and Clinical Nurse Specialist Modifiers
Effective July 1, 1999, for dates of service of January 1, 1999, and after, claims for Nurse Practitioners (NPs), Physician Assistants (PAs) and Clinical Nurse Specialists (CNSs) rendering physician-type services in certain settings **do not** require a modifier. Claims submitted for NP, CNS, and PA services must be reported under the Practitioners Provider Identification Number (PIN). Payment for NP, CNS, and PA claims are based on that PIN.

NOTE: A modifier will continue to be used when billing for services provided by these nonphysician practitioners when performing as assistants-at-surgery.

Except for NP, PA, & CNS services furnished to patients in rural health clinics (RHCs) and federally qualified health centers (FQHCs), there are no longer any restrictions on the settings in which PGBA will pay for these services. You may refer to the May 1999 *Medicare Advisory* for additional information regarding NPs, CNSs, and PAs.

WHAT THIS MEANS TO YOU

Effective July 1, 1999, for dates of service of January 1, 1999, and after, use the assigned practitioner's PIN to submit claims for NPs, CNSs and PAs rendering physician services and no longer use modifiers, except for assistant-at-surgery services. Use modifier AS for billing assistant-at-surgery services.

PHYSICIAN RECOGNITION AWARDS

The following SCMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned.

Robert Michael Amory, DO
Bryan Keith Anderson, MD
Philip Lee Bertucci, MD
Ponce D. Bullard, MD
Gary Randall Culbertson, MD
C. P. Dunbar, MD
G. Paul Eleazer, MD
Larry Ray Faulkner, MD
Bogdan Petru Gheorghiu, MD
Robert Clemans Goodbar, MD
Richard Kent Harding, MD
Douglas Paul Harr, MD
Gary D. Harter, MD
Otis Monroe Hill, MD
Edgar Olin Horger, MD
Rudolph Jokl, MD
Carl Henry Jones, MD
Lawrence Edward Klein, MD
John Woodbury McDonald, MD
Ronald Dale Padgett, MD
Melanie H. Pagette, MD
Stephen Frederic Serbin, MD
Bobby G. Thompson, MD
Dale Allen Van Slooten, MD
Charles Marshall Webb, MD
Maria Kathleen Wiley, MD

CONGRATULATIONS TO THIS YEAR'S WINNERS

Congratulations to the following physicians who won door prizes at the South Carolina Medical Association Annual Meeting and Scientific Session that was held April 29-May 2, 1999.

Myron Bell, MD, Y2K Computer Systems Evaluation sponsored by *SCMA Practice Management Services, Inc.*
David Culpepper, MD, Set of Rice Spoons sponsored by *BellSouth*
Alexander Donald, MD, 12th Hole Augusta National Print sponsored by *Physicians Care Network*
Roger Gaddy, MD, Software System sponsored by *Horizons Unlimited 2000*
Larry McManus, MD; Golf Ball sponsored by *Interim Healthcare*
Richard Miller, MD, Golf Club sponsored by *Southeastern*
Chuck Mills, MD, Air Purifier sponsored by *Alpine Industries*
Doug Quarles, MD, 9' Color TV/VCR sponsored by *SCMA Financial Services, Inc.*
Cheryl Sarmineto, MD, Arthrite Textbook sponsored by *Ortho-McNeil Pharm.*
Ralph Tesseneer, MD, Base System sponsored by *Fox Meadows Software*
C. Tucker Weston, MD, First Aid Kit sponsored by *PHC Medical Sales, Inc.*

WANT TO KNOW HOW YOU STACK UP WITH YOUR E & M UTILIZATION?

While the key to selection of any CPT code should be the supporting documentation, evidence of undercoding may indicate possible lost revenues. On the flip side, overcoding may indicate the possibility of potential liability issues. Let us compare your distribution of E & M services with expected patterns found in national distribution information for your specialty. We will provide you with both a numerical and graphical analysis of the comparison and you can see just how you really do stack up. ***For more information, call Anne Harvin Gavin at (800) 327-1021, extension 260.***

DATE CHANGE FOR RISK MANAGEMENT SEMINAR FOR NEW PHYSICIANS

The next Risk Management Seminar for New Physicians will be held Friday, November 5, 1999, instead of the previously announced date of October 22, 1999. There will be a session from 9 a.m.-12:00 p.m. and an additional seminar will be held from 1:00 p.m.-4:00 p.m. *For more information or to register, contact Melissa Hamby at (800) 327-1021, ext. 253.*

The Journal OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 95 JUNE 1999 NUMBER 6

THE MODIFIABLE FACTORS CONTRIBUTING TO LEADING CAUSES OF DEATH IN SOUTH CAROLINA

ERIN D. PILIBOSIAN, M.S.P.H.*
MANXIA WU, M.P.H.
TIM E. ALDRICH, Ph.D., M.P.H.
FRAN C. WHEELER, Ph.D.

INTRODUCTION

In 1996, 34,035 people died in the state of South Carolina. Of these deaths, almost 70 percent were due to chronic diseases, such as heart disease, cancer, or stroke (Table 1). This is a tremendous change from the earlier part of the century when most deaths were due to infectious diseases, such as pneumonia, tuberculosis, and diarrhea.[1] This shift is significant because there are known ways to prevent or delay the development of chronic diseases, thereby lengthening years of life. The purpose of this article is to report modifiable risk factors for disease mortality, primarily chronic disease mortality. If the risk factor reduction guidelines are followed, chronic disease mortality should lessen.

METHODS

In this report, the top ten causes of death for the most recent year (1996) were obtained from Public Health Statistics and Information Systems at South Carolina Department of Health and Environmental Control. Then, estimates of the number of deaths due to selected modifiable risk factors were made using results of a study published in 1993 by McGinnis and Foege.[2]

In their study, McGinnis and Foege reviewed quantitative evaluations of various factors related to morbidity and mortality, published between 1977 and 1993. The articles assessed risk estimates through simple tallies of whether the presence or absence of a factor was related to a given outcome or through population attributable risks and relative risks. McGinnis and Foege found that nearly 50 percent of mortality could be prevented by nine risk factors: tobacco, diet/physical activity, alcohol, microbial agents, toxic agents, firearms, sexual behavior, motor vehicles, and illicit use of drugs.[2]

The proportion of total deaths due to each of the leading chronic causes of death (i.e. percent of total deaths that were due to cardiovascular disease) was obtained for South Carolina and for the United States. Also, the prevalence of several modifiable risk factors was determined for South Carolina and the United States from the Behavioral Risk Factor Surveillance System. The proportion of total deaths and the prevalence of many of these risk factors were similar for both South Carolina and the United States; this similarity is based on ranking or ordering, not exact values. For these reasons, we feel confident in adapting the national average weights for the attributable risk estimates to the South Carolina data.

---

* Address correspondence to Ms. Pilibosian at Prevention Research Center, USC School of Public Health, Columbia, SC 29208.

Table 1. Ten leading causes of death in South Carolina, 1996 *

Cause of death	Number
Heart disease	10,094
Cancer	7,614
Stroke	2,852
Accidents	1,712
COPD & allied conditions	1,458
Pneumonia & influenza	1,105
Diabetes mellitus	937
HIV infection	532
Suicide	496
Homicide & legal intervention	377
All other causes	6,858
Total, All Causes	**34,035**

* *From Public Health Statistics and Information Systems, South Carolina Department of Health and Environmental Control*

For this paper, the estimated number of deaths due to each risk factor was found. The percentage of deaths attributable to each risk factor was adapted to South Carolina death certificate data from the national estimates determined by McGinnis and Foege. All responses are rounded to the nearest whole hundred. To determine the 95 percent confidence intervals for these estimated numbers of death, the sample size of the least common cause of chronic disease death (diabetes: n=937) was used to place confidence limits on the specific cause of death (e.g., cardiovascular disease mortality in South Carolina was the most different from the United States; this method led to a standard error of 0.016.) This was done in an attempt to provide liberal confidence limits and to merge sample size considerations with the recognized state-specific variation in causes of death and risk factors. Using the conventional 1.96 limits of the 95 percent confidence variation, the approximate confidence intervals were determined using the Poisson distribution.

RESULTS

These results demonstrate that small modifications in individual lifestyles could prevent nearly 50 percent of deaths in South Carolina annually. These data provide a state-specific perspective on the fraction of deaths that may be available. This accounts for approximately 17,000 deaths each year (Table 2).

Tobacco: Tobacco use accounts for 6,500 deaths each year in South Carolina. It contributes to deaths from cancer, cardiovascular disease, lung disease, low birth weight, and burns.[3]

Diet and Physical Inactivity: When a poor diet and low levels of physical activity are combined, they raise the risk for approximately 4,800 deaths per year in South Carolina. Poor dietary conditions have been associated with an increased risk of cardiovascular disease, cancer, and diabetes.[4] Regular physical activity improves overall health by reducing the risk of heart disease, diabetes, hypertension, colon cancer, depression and anxiety, and osteoporosis.[5]

Alcohol: Misuse of alcohol contributes to the risk for 1,700 deaths annually in South Carolina. Alcohol is related to deaths due to cirrhosis, cancer, motor vehicle fatalities, and home injuries. There are also many adverse social and economic consequences due to the misuse of alcohol.[2]

Microbial Agents: Approximately 1,400 deaths in South Carolina annually are due to microbial agents. The major causes of death from infectious agents are pneumonia, hepatitis, meningitis, encephalitis, and influenza.[6]

Toxic Agents: In South Carolina, 1,000 deaths annually are estimated to be due to toxic agents. Occupational hazards, environmental pollutants, and contaminants of food and water supplies are examples of toxic agents. Toxic agents are thought to lead mostly to cancer deaths; however, they may contribute to dysfunctions in the heart, liver, lungs, kidneys, bladder and nervous system.[2]

Firearms: Deaths from firearms include homicides, suicides, and unintentional deaths. In South Carolina, this translates to 700 deaths per year attributable to firearms. South Carolina data does not permit a determination whether these deaths are intentional (homicides and suicides) or unintentional.

Sexual Behavior: Sexual behavior is defined as unprotected sexual intercourse. These behaviors are associated with an increased risk of preventable disease and disability. Three hundred fifty people die annually in South Carolina due to their sexual practices. One of the most prevalent causes of death due to sexual behaviors is Hepatitis B, which is primarily sexually transmitted.[2]

Motor Vehicles: Deaths from motor vehicle injuries to passengers and pedestrians cause nearly 350 deaths in South Carolina annually. These 350 deaths do not include motor vehicle accidents causing death when alcohol or drugs are involved.

Illicit use of drugs: Approximately 300 deaths are caused annually by illicit use of drugs. Drug use contributes to death from overdose, suicide, homicide, motor vehicle injury, HIV infection, pneumonia, and hepatitis.[2]

DISCUSSION

Nearly 50 percent of deaths each year in South Carolina can be prevented by the nine risk factors previously mentioned. The top three preventable causes of death are tobacco use, physical activity and diet, and misuse of alcohol. These three risk factors contribute to almost 40 percent of all deaths in South Carolina. These risk factors, as well as many others, are modifiable. By looking at preventable causes of death, rather than on the traditional causes of death, the importance of prevention strategies becomes clear.

The prevalence of cigarette smoking in South Carolina is 24.2 percent, which is above the national median prevalence of 23.5 percent.[7] Knowing the prevalence of cigarette smoking in South Carolina, physicians can implement targeted intervention programs. With effective strategies in place, the prevalence of cigarette smoking should decrease and subsequently, deaths due to tobacco use will decline.

Physical activity is another risk factor that is modifiable. If physicians encourage their patients to be more active and to follow a healthy diet, disease risk will be decreased. The public must be informed that even a little exercise is better than no exercise at all and that 30 minutes per day of moderate activity is needed for significant health effects. Physicians are the most influential persons in portraying this information to their patients.

Alcohol misuse is widespread in this country. An estimated 18 million United States residents suffer from alcohol dependence, and approximately 76 million are affected by alcohol abuse at some time in their lives.[8] With so many deaths attrib-

Table 2. Modifiable causes of death in South Carolina

Cause	Population attributable risk percent *	Estimated number of deaths	95% Confidence Interval
Tobacco	19	6,500	(6,100, 6,920)
Diet/Physical activity	14	4,800	(4,500, 5,110)
Alcohol	5	1,700	(1,600, 1,810)
Microbial agents	4	1,400	(1,310, 1,490)
Toxic agents	3	1,000	(940, 1,060)
Firearms	2	700	(650, 760)
Sexual behavior	1	350	(310, 390)
Motor vehicles	1	350	(310, 390)
Illicit use of drugs	<1	300	(270, 340)
Total	50	17,100	(16,000, 18,200)

*Adapted from McGinnis and Foege[2]

uted to alcohol each year, it is important for physicians to inform their patients of the ramifications of alcohol misuse.

Prevention initiatives can decrease the number of deaths due to these risk factors each year. People cannot engage in preventive behaviors if they are not sure where to begin; they must have guidance and direction. Physicians need to emphasize to patients how important it is to maintain a healthy lifestyle and guide them in beginning a new "healthy lifestyle".

This paper also notes a major limitation in death certificate data. The South Carolina death certificate does not include some pertinent risk factor information, such as behavioral or environmental risk factors. Without this information, the number of deaths due to certain causes in South Carolina was estimated from national averages. Although we are confident in the data reported in this paper, estimates could have been assessed more definitely, rather than estimated, if South Carolina had this information on the death certificate. For example, we could determine approximately how many people died due to tobacco use or because of poor diet conditions in the state of South Carolina, rather than having to rely on national averages to obtain estimates and apply those national averages to South Carolina deaths.

The importance of this paper is to emphasize that many types of death could be delayed. Many risk factors are modifiable because of their behavioral nature. Physicians need to inform patients and the public of these risk factors and advocate for community initiatives to support healthy behaviors. With these changes in place, people will live longer before they are diagnosed with disease and there will be an increase in average years of life lived.

SUMMARY

In 1996, there were 34,035 deaths in South Carolina. Almost 70 percent of these deaths were due to chronic diseases. There are known ways to prevent chronic diseases from developing or at least delay their developmental process, thereby lengthening years of life. The purpose of this paper is to report modifiable risk factors for mortality related to leading causes of death. The top ten causes of death in South Carolina were obtained from the South Carolina Department of Health and Environmental Control. Estimates of the number of deaths due to certain modifiable risk factors were made using results of a study published by McGinnis and Foege. The percentage of deaths due to each cause was adapted to South Carolina death certificate data from the national estimates. Results indicate that small modifications in individual lifestyles could prevent or delay nearly 50 percent of deaths in South Carolina annually. Tobacco use, diet and physical activity, and misuse of alcohol contribute to the largest number of deaths. Other modifiable behaviors contributing to the 50 percent mortality are microbial agents, toxic agents, firearms, sexual behavior, motor vehicle accidents, and illicit use of drugs. The implication in these findings is that these risk factors for mortality are mainly modifiable. There are many causes of death that may be delayed due to these modifiable risk factors. By looking at preventable causes of death, rather than focusing on traditional causes of death, it becomes clear that prevention strategies are critically important.

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FIRE ANTS: A CONTINUING COMMUNITY HEALTH THREAT IN SOUTH CAROLINA

SAMUEL T. CALDWELL, M.A.*
STANLEY H. SCHUMAN, M.D., DR.P.H.
WILLIAM M. SIMPSON, JR., M.D.

INTRODUCTION

The red imported fire ant (IFA), *Solenopsis invicta*, has slowly advanced across South Carolina for almost 50 years. IFA was first reported in Charleston and Orangeburg Counties in 1952. By 1973, IFA had spread to 27 counties from the coast to the midlands. By 1986, IFA infestations were reported in all 46 counties in the state.[1]

IFA represents a community health concern because of its aggressive nature and its ability to displace other ant species. It has adapted well to both urban and rural settings placing any intruder at risk for its burning, painful stings. IFA infestations occur both outdoors and indoors. Fortunately, most sting victims (80 percent-85 percent) only develop the characteristic pustule following a sting. The pustules are venom-specific and are sterile, but may become secondarily infected after scratching. About 15 percent of IFA sting victims experience localized edematous reactions that take several days to subside. One to two percent of sting victims may develop a generalized allergic reaction to IFA venom leading to anaphylaxis, despite a lack of other allergies in the medical history. Patients do not usually progress from one clinical category to another category.

Our office has documented IFA morbidity and mortality patterns in South Carolina for almost thirty years. The first statewide physician survey[2] for consultation and treatment of IFA stings reported an average of 363 cases per year during 1970-1972. Over 12,000 cases were reported by physicians across the state in 1986.3 The number of IFA cases reported for 1990 declined to about 5,000; however, this survey[4] had a lower physician response rate and did not ask about patients who consulted by phone on IFA stings and did not receive medical treatment.

This 1998 study was initiated in support of our colleagues at Clemson University who needed statewide medical data to support their IFA control and prevention programs. It was hypothesized that IFA had now fully infested the upper tier of counties in South Carolina.

METHODS

A questionnaire with a postage-paid return envelope was mailed in December 1998 to 3,665 physicians in South Carolina whose practice included emergency medicine, family practice, general practice, pediatrics, internal medicine, and occupational medicine. These practitioners were identified from the *1998 Directory of Physicians Licensed and Registered in South Carolina* published by the South Carolina Medical Association. They were asked to estimate the number of patients (≤ age 14 years and (≥ age 15 years) during the past twelve months who received advice (telephone consultation only) or treatment (in office, emergency room, or hospitalized) for IFA stings. The physicians were also asked to report the number of patients treated for anaphylaxis, referred to an allergist, or who had died from IFA stings.

RESULTS

The survey population was reduced to 3,368 because 297 physicians had moved out-of-state or had not seen patients in 1998. Also excluded to avoid double reporting were six respondents who identified themselves as allergists. A total of 1,268 physicians (38 percent) responded to the survey.

Table 1 lists the cases by age, treatment, and outcome. 11,819 cases of medical consultation and

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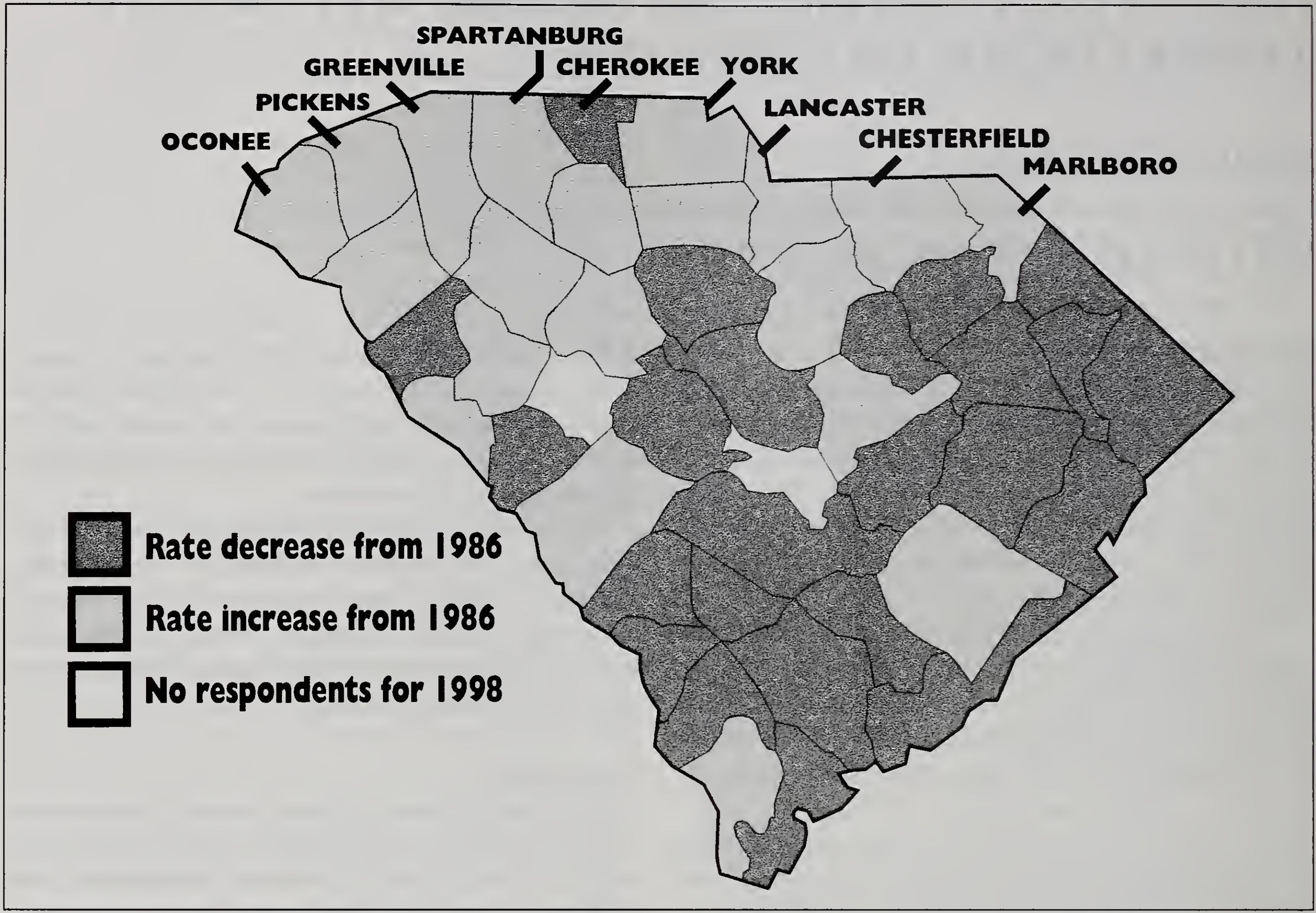

Figure 1: Change in rates per 10,000 Population from 1986 to 1998 for IFA Sting Medical Consultation and Treatment in South Carolina

treatment for IFA stings were reported for 1998. 57 percent of these occurred in children age 14 or less. Patients treated in physician offices led all treatment categories and accounted for 51 percent of the patients $\leq$ age 14 years and 65 percent of those $\geq$ 15 years. Patients who only consulted their physicians by telephone (were not seen by a physician for treatment) accounted for 30 percent of the total. About 12 percent of both age groups were treated in emergency rooms and less than one percent were hospitalized. Physicians reported that 176 patients (two percent) received emergency treatment for anaphylaxis while three percent of both age groups were referred to an allergist for desensitization to IFA venom.

Two deaths associated with IFA stings were documented. Both involved patients in their seventies. The first patient died from complications three days after being stung hundreds of times in her nursing home bed. The second patient fell into a fire ant mound and had classical anaphylaxis. The attending physician of this patient believed the victim might have survived if it were not for severe preexisting cardiac and pulmonary disease.

Table 2 compares the results of three physician surveys for medical consultation and treatment of IFA stings for 1986, 1990, and the current study year of 1998. Although response rates varied among the surveys and one question was not asked in two of the surveys, the percent distribution of the parameters listed were remarkably consistent over the years. Of note are the consistent two percent of patients treated for anaphylaxis and the three percent of patients referred to allergists.

Table 3 lists and Figure 1 displays the change in rates per 10,000 population for IFA medical consultation and treatment by county from 1986 to 1998. All except one of the upper tier of counties (Oconee, Pickens, Greenville, Spartanburg, Cherokee, York, Lancaster, Chesterfield, and Marlboro) had significant increases in their rates. These ranged from 129 percent for Union County to almost 2,000

Table 1
Physician Reports of Consultation and Treatment of Imported Fire Ant Stings in South Carolina, 1998

Patient Age	Total	TREATMENT					OUTCOME	
		Telephone Consult Only	Treated in Office	Treated in ER	Admitted to Hospital	Treated for Anaphylaxis	Referred to Allergist	Died
≤ 14	6,737	2,471	3,439	811	16	75	203	0
≥ 15	5,082	1,089	3,311	643	40	101	152	2
Total	11,819	3,560	6,750	1,454	56	176	355	2

Table 2
Results from Three Physician Surveys for Medical Consultation & Treatment of Imported Fire Ant Stings in South Carolina

Parameter	Survey Year		
	1986[1]	1990[3]	1998
Survey population	1,996	2,224	3,368
Respondents	1,012	940	1,286
% Response	50%	42%	38%
Total Cases Reported:	12,127	4,975	11,819
- Telephone consultations	4,542 (37%)	NA	3,560 (30%)
- Treated in office	5,469 (45%)	4,107 (83%)	6,750(57%)
- Treated in E.R.	1,994 (16%)	827 (16%)	1,454 (12%)
- Hospitalized	122 (1%)	27 (1%)	56 (0.5%)
Deaths	0	1	2
Patients treated for anaphylaxis	190 (2%)	104 (2%)	176 (2%)
Patients referred to an allergist	NA	170 (3%)	355 (3%)
Cases per respondent	12	5	9

NA = question not asked in the survey

percent for Oconee County! Most of the counties in the coastal and midlands regions experienced declines in their rates although the declines were not as dramatic as the increases observed in the upper tier of counties.

DISCUSSION

This 1998 physician survey confirms the fact that

Table 3. Cases of Medical Consultation and Treatment for IFA Stings in South Carolina, 1986 & 1998

	Cases (n)		Rate per 10,000 Population	
County	**1986[1]**	**1998**	**1986**	**1998**
Abbeville	34	27	14.8	11.3
Aiken	97	154	9.2	12.7
Allendale	76	21	69.0	17.5
Anderson	71	654	4.7	45.1
Bamberg	74	42	38.9	24.7
Barnwell	16	4	7.6	1.8
Beaufort	339	148	45.8	17.2
Berkeley	34	51	2.8	4.0
Calhoun	15	NR	11.5	NR
Charleston	1,932	1,296	65.7	43.9
Cherokee	39	26	9.1	5.8
Chester	61	114	19.7	35.6
Chesterfield	6	68	1.5	17.4
Clarendon	56	44	20.0	15.7
Colleton	149	63	43.8	18.5
Darlington	564	431	82.9	69.5
Dillon	71	37	22.2	12.8
Dorchester	182	122	24.9	14.7
Edgefield	175	89	97.2	49.4
Fairfield	115	44	54.8	20.0
Florence	720	470	59.0	41.2
Georgetown	162	72	40.5	15.7
Greenville	23	467	0.7	14.6
Greenwood	12	304	1.9	50.7
Hampton	41	25	21.6	13.9
Horry	654	656	53.2	45.6
Jasper	17	20	10.6	13.3
Kershaw	54	197	13.2	44.8
Lancaster	34	89	5.7	16.2
Laurens	0	202	0	34.8
Lee	220	146	115.8	81.1
Lexington	916	197	52.6	11.7
McCormick	0	4	0	4.4
Marion	218	30	60.6	8.8
Marlboro	3	27	0.9	9.3
Newberry	169	182	52.8	55.2
Oconee	6	136	1.1	23.9
Orangeburg	525	299	59.0	35.2
Pickens	8	21	0.9	2.2
Richland	3,690	1,797	128.1	62.8
Saluda	13	NR	7.6	NR
Spartanburg	63	119	2.9	5.2
Sumter	171	633	18.6	61.5
Union	37	82	11.9	27.3
Williamsburg	238	20	59.5	5.4
York	27	686	22.5	52.4
State	**12,127**	**11,819**	**35.7**	**33.8**

NR = No respondent data

IFA infestations are a community health problem in South Carolina. As expected, there were significant increases in the number of cases and rates reported among the upper tier of counties in the state. The declines in cases and rates observed among most of the counties in the coastal and midlands regions are not surprising. The declines do not reflect any decrease in the region's fire ant mounds. IFA sting victims residing in these areas have now had years of experience in dealing with IFA stings and would be less likely to seek medical attention except for the more severe cases.

Extrapolation of study results (assuming that the non-respondent physicians were similar to the respondent physicians) suggests that there were as many as 24,000 cases that sought medical consultation and treatment in 1986 and 33,000 cases in 1998. This reflects a statewide rate increase (34 percent) from 71 per 10,000 population in 1986 to 94 per 10,000 population in 1998. The literature reports [4,5] that only about five percent of fire ant sting victims seek medical treatment. This would extrapolate to 660,000 cases of fire ant stings in South Carolina during 1998.

What are the medical costs involved? For the 11,819 cases identified in 1998, a conservative estimate for total medical costs is 0.9 million dollars ($18,000 for over-the-counter preparations purchased by patients in the telephone consultation category; $236,000 for office visits and professional fees; $364,000 for treatment in emergency rooms; $56,000 for hospitalizations; and $177,500 for evaluation and desensitization by allergists). Extrapolating this estimate for 1998, there were an estimated 2.4 million dollars spent for medical care of IFA stings in South Carolina.

The study respondents were not asked if their patients were stung outdoors or indoors. Of note is the fact that two practitioners had patients who were stung by IFA while lying helpless in nursing home beds. Bedridden[6] or incapacitated patients and infants are at particular risk of multiple IFA stings since they cannot easily retreat from IFA or brush them off their bodies. Tourists or new residents from areas not yet infested are other high-risk groups. Homeowners, workers, IFA-sensitized patients, and their attending physicians need to realize that IFA may invade dwellings. A hospital pharmacist in South Carolina almost died from anaphylaxis after a fire ant dropped onto her neck from a ceiling vent while she was busy filling prescriptions.[7]

SUMMARY

Imported fire ants are now firmly established in all 46 counties of South Carolina. In 1998 there were an estimated 660,000 cases in the state of which approximately 33,000 sought medical treatment at an estimated cost of 2.4 million dollars. Residents and visitors are at risk for IFA attacks that may occur indoors as well as outdoors. While IFA sting victims in endemic areas of the state may be less likely to seek medical treatment, patients in recently infested areas seem to be more likely to seek treatment since they are relatively unfamiliar with the multiple, painful IFA stings and pustules.

Citizens need to control IFA infestations around and within their homes according to guidelines recommended by the Clemson University Cooperative Extension Service. Regional IFA control programs were discontinued in the past because of costs and environmental chemical concerns. Obviously, we need to support ongoing research aimed at developing improved and safe strategies for the local and regional control of IFA.

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PROMOTING HEALTH IN SOUTH CAROLINA: A CHARGE TO PRIMARY CARE PROVIDERS

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Since the establishment of the National Cancer Program, much progress has been made in terms of understanding of what cancer is, how it develops, who is at risk, how it can be prevented, and how it can best be controlled. However, cancer continues to be a major health problem in South Carolina. In 1998, it is estimated that approximately 17,600 new cancer cases will be diagnosed in South Carolina. In spite of the progress being made relative to cancer prevention, risk reduction, early detection, and treatment, 8,100 South Carolinians are expected to die from this disease (Figure)[1].

Maintaining a healthy lifestyle is considered pivotal to controlling cancer[2]. As a result, numerous health promotion and cancer risk reduction efforts have been launched throughout the state by health educators, lay cancer advocates, and leaders of various public and private community organizations.[3-4] Yet, data suggest that health information and recommendations by primary care providers are considered to be much more likely to result in a desired behavior change.[5]

One might assume that given the cancer trends in South Carolina and the known influence of provider advice and counsel on patients' health behavior that physicians, nurse practitioners, and physician assistants who function as primary care providers would devote a considerable amount of time within their practices toward helping patients to enhance their health and reduce their health risks. However, little is known about the extent to which primary care providers in South Carolina counsel their patients about health promotion, risk reduction, nor the degree to which they feel prepared to do so. Therefore, a study was undertaken to explore these issues among the physicians, nurse practitioners, and physician assistants who function as primary care providers throughout the state. The study aimed to:

(1) identify the behaviors believed by primary care providers to be most related to health status,
(2) describe the beliefs of primary care providers regarding the ability of patients to independently modify their health behavior,
(3) describe the beliefs of primary care providers regarding their ability to influence patients to modify health behavior,
(4) assess the extent to which primary care providers gather information from patients regarding health practices, and
(5) determine the degree to which primary care providers feel prepared to advise and counsel patients about health promotion and cancer risk reduction.

Methods

To examine the extent to which primary care providers in South Carolina focus on health promotion and cancer risk reduction in their practices a 10-part survey instrument was designed. Incorporated within the instrument were items reflecting health behaviors believed by primary care providers to be most related to health status, beliefs of primary care providers regarding their patients' ability to independently modify their health behavior, beliefs of primary care providers regarding their ability to help patients modify their health behavior, and items denoting the extent to which the providers gather data from patients regarding behaviors known to effect health, and the degree to which the primary care provider felt prepared to advise and counsel patients about health promotion and cancer risk reduction. Eight items were also included to provide data regarding the characteristics of the primary care providers' practice. For the purpose of this study, the health behaviors under consideration were tobacco control, diet modification, and exercise. For example, "it is important for primary care providers to devote time to helping patients modify their health behavior in order to reduce health risks", "to what extent do you gather information from your patients regarding smoking, diet, and exercise?", and "how prepared do you feel to counsel patients regarding smoking cessation, diet modification, and exercise?" To evaluate clarity and validity of the items, the instrument was reviewed by a panel of experts iwhich included three members of a health educator, a primary care clinician, and a statistician.

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RESULTS

Characteristics of the Survey Respondents

The survey instrument was mailed to each physician, nurse practitioner, and physician assistant functioning as a primary care provider in South Carolina as of January 1998. Seven hundred fifty seven of the surveys were completed and returned. Four hundred eighty two surveys were returned by physicians (14.4 percent), 208 were returned by nurse practitioners (37.1 percent), and, 67 were returned by physicians assistants (44.7 percent).

The patients served by the physicians, nurse practitioners and physician assistants responding to the survey varied considerably. The majority of the physicians responding to the survey indicated that most of the patients in their practice were white females. The nurse practitioners described their caseload as consisting primarily of minority females, while the majority of the physician assistants' patients were minority men. And, while the physicians, nurse practitioners and physician assistants described their caseloads as consisting primarily of adults, the physical assistants were noted to be least likely to care for patients under the age of 16 and the nurse practitioners were noted to be least likely to care for patients 65 years of age or older.

Impact of Tobacco, Diet, and Exercise on Health

Table 1

Primary Care Providers Reporting Health Promotion Behavior As Very Important

	Physicians (n = 482)		Nurse Practitioners (n = 208)		Physician Assistants (n = 67)		Total (N = 757)	
	n	%	n	%	n	%	n	%
Elimination of cigarette smoking	472	97.9	198	95.2	64	95.5	734	97.0
Maintaining a healthy diet	337	69.9	171	82.2	44	65.7	552	72.9
Avoidance of excess calories	345	71.6	152	73.1	37	55.2	534	70.5
Avoidance of saturated fats	301	62.4	152	73.1	32	47.8	485	64.1
Aerobic activity 3 times per week	318	66.0	144	69.2	37	55.2	499	65.9

Status

The primary care providers responding to the survey were relatively consistent in their beliefs about the impact of tobacco, diet, and exercise on health status. The physicians, nurse practitioners and physicians assistants each expressed a strong belief that eliminating tobacco, eating a balanced diet, avoiding excesses in caloric intake, avoiding foods high in saturated fats, and engaging in aerobic activity at least three times per week were important health behaviors for the average person (Table 1). However, the degree of consensus among the primary care providers was noted to be the greatest relative to the importance of eliminating tobacco and least relative to the importance of exercise on patients' health status.

Recognizing the relationship between smoking, diet, and exercise and health status, patients will often attempt to modify their behavior in an attempt to improve their health status using self-directed approaches. When asked how successful they believed most patients were in their attempts to modify their health behavior using self directed approaches, surprisingly few of the primary care providers responded 'successful' (Table 2). Further data analysis revealed that physicians, nurse practitioners, and physician assistants believed that patients would have least success with modifying smoking behavior and the greatest success with diet and exercise.

Health Promotion and Risk Reduction in the Practice of Primary Care

It is known that patient assessment is critical to the formulation of a patient diagnosis and the development of a patient specific plan of care. Therefore, an attempt was made to determine the extent to which the primary care providers gathered information relative to tobacco use, diet and exercise from their patients. *Data revealed that most of the primary care providers surveyed varied in the degree to which they gathered information from their patients related to smoking, diet or exercise.* Eighty eight percent of the primary care providers reported that they 'routinely' gathered information from patients regarding smoking. Fifty percent of the primary care providers surveyed reported that they routinely gathered information from patients regarding diet. And, fifty two percent of the primary care providers surveyed reported that they routinely gathered information from patients regarding exercise. However, only 38.2 percent of the physicians, 44.7 percent of the nurse practitioners and 28.4 percent of the physician assistants surveyed indicated that they 'routinely' gathered information from patients regarding smoking, diet and exercise.

Providing Health Promotion and Cancer Risk Reduction

Given the scope of practice of primary care providers, when compared to other health care providers, they would appear to be best positioned to advise and counsel patients regarding health promotion and cancer risk reduction. The majority of the primary care providers reported that if given the appropriate support they could help patients modify their health behavior (Table 3). When asked if it was important for providers to devote practice time to helping patients reduce their health risks, the majority of the primary care providers surveyed responded in the affirmative. However, 12 percent of the physicians, ten percent of the nurse practitioners, and 16 percent of the physician assistants responding to the survey did not.

When asked if they felt prepared to advise and counsel their patients relative to smoking, 66 percent of the primary care provides reported that they felt prepared. Forty nine percent of the primary care providers reported that they felt prepared to counsel patients relative to diet. Forty five percent of the primary care providers reported that they felt prepared to counsel patients relative to exercise. Further analysis revealed that only 33.6 percent of the physicians, 41.8 percent of the nurse practitioners, and 34.3 percent of the physicians assistants reported that they felt prepared to counsel patients relative to smoking, diet *and* exercise. However, the greater majority of the primary care providers involved in the survey indicated that they would be interested in participating in a variety of patient-oriented educational programs focused on smoking cessation, diet, nutrition, exercise and fitness if they were available (Table 4).

Discussion

The impact of tobacco, diet, and exercise on health status has been known for decades. Smoking, diet and exercise are noted as being of major impor-

Table 2
Primary Care Providers Reporting Patients Ability to Modify Health Behavior as Successful

	Physicians (n = 482)		Nurse Practitioners (n = 208)		Physician Assistants (n = 67)		Total (N = 757)	
	n	%	n	%	n	%	n	%
Smoking*	160	33.2	52	25.0	23	34.3	235	31.0
Diet	174	36.1	77	37.0	20	29.9	271	35.8
Exercise	200	41.5	69	33.2	23	34.3	292	38.6

Table 3
Primary Care Providers Reporting They Could Help Patients Modify Their Health Behavior If Health Promotion Resources Were More Readily Available

	Physicians (n = 482)		Nurse Practitioners (n = 208)		Physician Assistants (n = 67)		Total (N = 757)	
	n	%	n	%	n	%	n	%
Smoking	418	86.7	191	91.8	61	91.0	670	88.5
Diet	411	85.3	184	88.5	48	71.6	643	84.9
Exercise	406	84.2	184	88.5	46	68.7	636	84.0

Table 4
Primary Care Providers Reporting Interest in Participating in Patient-Oriented Health Promotion and Cancer Risk Reduction

	Physicians (n = 482)		Nurse Practitioners (n = 208)		Physician Assistants (n = 67)		Total (N = 757)	
	n	%	n	%	n	%	n	%
Smoking	268	55.8	117	72.1	38	56.7	457	60.4
Diet	308	70.1	181	87.0	52	77.6	571	74.4
Exercise	317	65.8	177	85.1	47	70.1	541	70.1

tance in the prevention and control of cancer and many other chronic health conditions.[1, 2,6-7] It is estimated that smoking accounts for 30 percent of all cancer deaths in the United States. As a result numerous efforts have been employed to discourage smoking and the use of tobacco products.[8] Evidence suggests that an estimated 35 percent of all cancers in the United States are due to dietary factors. While the Department of Health and Human Services reports that many factors must be considered when identifying dietary risk, the disproportionate consumption of foods high in fats, at the expense of foods high in complex carbohydrates and fiber, is noted to be the primary culprit. And, there is mounting evidence to support the association between exercise and cancer. As a result, the Centers of Disease Control and Prevention and the American College of Sports recommend that adults engage in a minimum of 30 minutes of moderate-intensity activity, on most, preferably all, days of the week to promote health, prevent disease, and maintain a healthy weight.[9]

It is generally believed that cancer incidence and mortality within and beyond South Carolina could be significantly reduced if current knowledge regarding health promotion, cancer prevention, and cancer risk reduction were effectively communicated to patients by health care professionals. As a result, primary care providers have been strongly urged to take a much more active role in the identification of patients at risk, in providing patient education, and in the promotion of health and risk reduction throughout the community. They have been encouraged to more assertively communicate messages to patients and consumers which emphasize the importance of tobacco control, diet modification and exercise. They have also been strongly urged to initiate health promotion and risk reduction programs within their practices.

The promotion of health and reduction of health risks should be the charge and challenge of each primary care providers. However, data suggest that often this is not the case. As future strategies for promoting the health of South Carolinians are proposed, it is recommended that consideration be given to the design of tools, resources, education and training opportunities for primary care providers. By doing so, we can better ensure that the physicians, nurse practitioners and physician assistants now serving in this capacity have the resources and skills needed to meet the challenge and fulfill their charge throughout the state.

While the nature of the methods used for data collection used in this study limit generalizability, the findings warrant careful consideration. The same is true regarding the value and implications of the findings to practice.

To obtain more information about strategies that may be used to promote health and reduce cancer risks among patients within your practice, visit these websites:

American Cancer Society
http://www.cancer.org
Centers of Disease Control and Prevention
http://www.cdc.gov/
Health Finder
http://www.healthfinder.org
National Cancer Institute
http://www.nci/nih.gov/
National Health Information Center
http://nhic-nt.health.org/
Office of Disease Prevention and Health Promotion
http://odphp.osophs.dhhs.gov/
5 a Day Program
http://www.dccps.nci.nih.gov/5aday/
Lung Cancer Educational Material
http://www.mediconsult.com
CDC's Tips (Tobacco information and prevention source
http://www.cdc.gov/nccdphp/osh/tobacco.htm
Smoking Cessation - AHCPR Practice Guidelines
http://www.ahcpr.gov/guide/

These Web sites are provided for information only. Hosts are responsible for their own content and availability

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Editorials

PEW THOUGHTS WHILE LISTENING TO PACHELBEL'S CANON IN D

My friend Don Bessinger of Greenville suggests we consider Bach as the fifth gospel. A fine thought, and in the same spirit I vote for Johann Pachelbel (1653-1706). True, we know relatively little about this composer. But number me among the millions who find in Pachelbel's canon in D, a large measure of source of solace, comfort, and inspiration not unlike that found in the scriptures. Pachelbel brought a balm to humankind.

Like most great compositions, the canon is deceptively simple. It begins calmly, methodically, with the familiar I-V-VI-iii-IV-I-IV-V chord progression. The composer next introduces stress through additional voices, dissonance, and increasing volume. Then comes the resolution, a calming after the storm. For me the canon offers a metaphor for life: birth, challenge, closure. With those who call it trite, overplayed, and exploited in too many commercials, I beg to differ. I can't hear it enough.

Over the years, I've collected a number of versions. Some feature string quartets, others Baroque chamber orchestras. One features a piano, another a brass ensemble. One has James Galway on the flute. Another carries in the background the fetching, throaty voice of Cleo Laine, singing "How and where will we touch again?" In yet another, the canon rises and falls above a gentle chorus of ocean surf, an acoustic image of eternal time. But the canon has never soothed me more than it did while sitting in the pew at Martine's funeral. Martine, you see, was Bill's daughter.

This story takes up where another left off 15 years ago (see "Bill's Lesion," *J SC Med Assoc* 1984; 80: 313-314). Bill was a special person, an American original, treasured by all who knew him. He gave liberally of time and talents to family, friends, and community. He and Anne gave to each of their eight children the family trademarks: a novel whistle ("You'd recognize it in Grand Central Station") and an uncommonly winning smile. I first met Bill through the Cub Scout troop in the same church where I now sat listening to Pachelbel. Somewhere there is a picture of me and my father sitting around at Camp Burnt Gin with Bill and his two older sons, Billy and Johnny. Everyone is smiling, especially Bill.

It was through Martine that as an adult I got to know Bill again. I had come back to town to practice medicine. Late one night, I was called in consultation by a neurosurgeon to see a patient whose serum sodium was 173 mEq/L following surgery for a ruptured berry aneurysm. She was asymptomatic but had lost her recent memory. I diagnosed infarction of the thirst center and corrected her life-threatening hypernatremia. Bill brought me a quart of shucked oysters. He took me into his circle of family and friends. That irresistible smile became a constant in my life.

The singular blend of art, science, and probability theory that defines our profession dooms each of us to sadness as well as joy, and the greatest sadness of my career came from Bill's asking me to do his physical examination. I found a coin lesion. I consulted a radiologist, a pulmonologist, an oncologist. We all agreed it had to come out. The lesion proved benign—a localized chronic inflammation caused by mineral oil caused in turn by his habitual use of a nasal salve. Postoperatively he developed pneumonia, then a subendocardial infarction, then the acute respiratory distress syndrome. He died.

It mattered not that Bill was 76 years old and fast approaching the usual lifespan of this family of origin. It mattered not that he had known the risks of thoracotomy. It mattered not that he, like most of us, would probably have preferred to avoid what Osler called "those cold gradations of decay so distressing to his friends." I never quite recovered. Ever since, I've kept a photograph of Bill in my office, a reminder not only of a special friend but also of fallibility, medicine's and my own.

Martine never got back her recent memory or her thirst sensation but coped reasonably well with both deficits. I tried to be her doctor for a while, even arranging a metabolic analysis of her sodium and water balance, but eventually passed her on to other hands, knowing now all too well the pitfalls of caring for "family." When Martine developed urinary calculi, then renal failure, we all assumed it was because she never drank enough water. As it turned out though, her organs were riddled with amyloidosis. Hospitalized with pneumonia, she was soon committed to hemodialysis and mechanical ventilation. She had one cardiac arrest after another. Through it all, she flashed that famous family smile. The nurses were amazed.

It was after one of my visits to Martine that I ran into Billy (her oldest brother, Bill's and Anne's first son) and his wife, Ginny. We walked out of the hospital together. It was a splendid autumn day. In the parking lot I emptied my sorrows.

"You know, the greatest regret of my professional career was advising Bill to have surgery."

Billy and Ginny simultaneously turned on me. "Come on Charley, let it go!"

"No," I continued, "not a day passes that I don't think of Bill."

Ginny then gave me the blessing I could never give myself, that I could receive only from a member of the family.

"Charley," she said gently but firmly, "*God* decided it was Bill's time to go. *You're* not that important!"

Pachelbel played on.

—CSB

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Continuing Medical Education

Third Quarter 1999 Calendar

Melissa Hamby, Director of Education

Stoney A. Abercrombie, MD, Chairperson

Published by the SCMA Committee on Continuing Medical Education
Post Office Box 11188, Columbia, SC 29211

Note: CME activities in neighboring states are listed when space permits.
Contact the Medical College of Georgia, Division of Continuing Education at (800) 221-6437 for other activities.

JULY

Monday – Thursday July 12-15, 1999
Sea Island, GA: The Cloister
19th Annual Obstetrics and Gynecology
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Ob/gyn, family practice, internal medicine
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 18 hours, AMA Category 1

Thursday – Sunday July 22-25, 1999
Myrtle Beach, SC: Embassy Suites Hotel at Kingston Plantation
South Carolina and North Carolina Otolaryngology/Head and Neck Surgery Assembly
TARGET AUDIENCE: Otolaryngologists
FACULTY: Antonio De La Cruz, MD; Donald C. Lanza, MD; Ira D. Papel, MD
CONTACT: Debbie Shealy; ext. 223, (803) 798-6207 or (800) 327-1021

Monday – Friday July 26-30, 1999
Sea Island, GA: The Cloister
3rd Annual Medical and Surgical Approaches to GI Disorders
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Gastroenterology, family practice, general surgery, internal medicine
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 22 hours, AMA Category 1

Thursday – Sunday July 29 – August 1, 1999
Asheville, NC: The Grove Park Inn
South Carolina Chapter of the American Academy of Pediatrics Annual Meeting and Scientific Program
SPONSOR: Mary Black Memorial Hospital
TARGET AUDIENCE: Pediatricians
FACULTY: John A. Barnard, MD; Edward E. Conway, Jr., MD; Terry O. Harville, MD; Jane G. Schaller, MD
CONTACT: Debbie Shealy, ext. 223, (803) 798-6207 or (800) 327-1021
CREDITS: 6 hours, AMA Category 1

AUGUST

Thursday – Saturday August 12-14, 1999
Sea Island, GA: The Cloister
Seizures, Spells and Shakes: Neurology for the Non-Neurologist
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Family practice, internal medicine, neurology, psychiatry, psychology
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 15 hours, AMA Category 1

Sunday – Friday August 15-20, 1999
Sea Island, GA: The Cloister
21st Annual Critical Care
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Emergency medicine, family practice, internal medicine
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 22 hours, AMA Category 1

Friday – Tuesday August 20-24, 1999
Sea Island, GA: The Cloister
9th Annual Sleep Disorders
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Family practice, neurology, psychiatry, psychology
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 25 hours, AMA Category 1

Wednesday – Friday August 25-27, 1999
Sea Island, GA: The Cloister
Update in Diabetes Mellitus
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Internal medicine, family practice, pediatrics
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 12 hours, AMA Category 1

SEPTEMBER

Friday – Saturday September 10-11, 1999
Clemson, SC: Madren Conference Center
MUSC/Clemson CME Weekend
SPONSOR: Medical University of South Carolina
DESCRIPTION: This conference is designed as an update for the primary care physician.
TARGET AUDIENCE: Primary care physicians
FACULTY: Guest and MUSC faculty
CONTACT: Pam Benjamin or Odessa Ussery; (843) 876-1925

Friday – Sunday September 10-12, 1999
Asheville, NC: The Grove Park Inn
South Carolina Society of Pathologists
TARGET AUDIENCE: Pathologists
FACULTY: Sharon A. Weiss, MD
CONTACT: Debbie Shealy; ext. 223, (803) 798-6207 or (800) 327-1021

Thursday – Friday September 16-17, 1999
Charleston, SC: Storm Eye Institute Auditorium at the Medical University of South Carolina
Development in Digestive Diseases
SPONSOR: Medical University of South Carolina
DESCRIPTION: This conference is designed as an update for the practicing gastroenterologists.
TARGET AUDIENCE: Gastroenterologists
FACULTY: Guest and MUSC faculty
CONTACT: Rita Oden; (843) 792-6865

Monday – Saturday Sept. 27-October 2, 1999
Charleston, SC: Westin Francis Marion Hotel
8th Intensive Review of Emergency Medicine
SPONSOR: Medical University of South Carolina
DESCRIPTION: This conference is designed as an intensive review for the emergency physician and family physician.
TARGET AUDIENCE: Emergency physicians, family physicians
FACULTY: Guest and MUSC faculty
TUITION: $800 for physicians
CONTACT: Odessa Ussery; (843) 876-1925
CREDITS: 45 hours, AMA Category 1

SCMA COMMITTEE ON CME

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On the Cover:

FIFTY YEARS AGO—

In the news — the U.S. recognized the Republic of Korea, headed by Syngman Rhee, also Israel and Transjordan. The North Atlantic Pact was signed creating NATO. The three western zones of Germany merged and the Berlin blockade was lifted. The Academy Award for Best Picture went to *All the King's Men.* Best actress award went to Olivia de Havilland in *The Heiress*, and best actor award went to Broderick Crawford for his role in *All the King's Men.* Hit songs of 1949 included "Mona Lisa," "Rudolph, the Red-Nosed Reindeer," "Mule Train," "Let's Take an Old-Fashioned Walk," "Some Enchanted Evening," "My Foolish Heart," and "Diamonds Are a Girl's Best Friend." Best seller books included *White Collar Zoo* by Clare Barnes, Jr., *How to Win at Canasta* by Oswald Jacoby, *Cheaper by the Dozen* by Frank B. Gilbreth, Jr. and Ernestine G. Carey and *The Greatest Story Ever Told* by Fulton Oursler.

In Science and Technology— the U. S. Air Force ended its two-year investigation of flying saucer reports by denying the authenticity of UFOs; Willard Libby of the University of Chicago reported the use of carbon-14 to determine the age of objects; eight essential amino acids for humans were described; and the first atomic bomb tests began in the USSR. William Giauque won the Nobel Prize in chemistry for work in thermodynamics. Ben Hogan was seriously injured in a car accident. The AMA advocated voluntary medical care plans. The minimum wage rose from 40 cents to 75 cents an hour. Rita Hayworth married Prince Ali Kahn. The Polaroid Land camera was introduced.[1] That's what was happening in 1949— in addition to graduation from the Medical College of the State of South Carolina for the group pictured on this month's cover that celebrated their 50th reunion this year.

Jane McCutchen Brown, Curator
Waring Historical Library

REFERENCES

1. Gordon, Lois and Gordon, Alan. *American Chronicle: Seven Decades in American Life 1920-1989.* New York: Crown Publishers, Inc. 1990

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Alliance Page

SCMAA-SCMA FOUNDATION SCHOLARSHIP AWARDS

On May 2, 1999, the South Carolina Medical Association Alliance (SCMAA) and the South Carolina Medical Association Foundation Scholarship Committee had the pleasure of presenting eighteen $2,000 scholarships to medical students from the University of South Carolina School of Medicine (USCSOM) and Medical University of South Carolina (MUSC) School of Medicine.

The recipients were chosen by an interview process conducted by the Scholarship Committee in Columbia and Charleston, and were determined on the basis of financial need, academics, extracurricular involvement, and interpersonal skills. This was a monumental task considering the exceptional and deserving students interviewed but those of us who served on the committee were most rewarded for the experience. These impressive students will be outstanding physicians, hopefully practicing in South Carolina. Seeing the future of medicine through these capable medical students' eyes certainly assures the continuation of the excellent medical care that exists in our state today.

USCSOM students receiving scholarships were:

Paula R. Hayes
Michael Lee Nunnery
Clint Thurmond Seymour
Levette Nicole Dunbar
John Mark Wessinger
Ann Elizabeth Rawlings
Mary Heather Shealy
Adam Ray Easterling

MUSC students receiving scholarships were:

Jennifer Lynn Harper
John Tompkins Ramey
Angela C, Gore
James A. Loging
Randall Nix Goodroe
Weirong Connie Ding
Odette Margit Houghton
Keidre LaShonda Jenkins
Nelly Frances Welsch
Julia Patricia Iannini

Other Foundation Scholarships given were:

1999-2000 Research Scholarship ($2,000)
Julia Patricia Iannini (MUSC)

Conway Hospital Medical Staff Scholarship ($2,500)
Jennifer Lynn Harper (MUSC)

Cardiology Consultants of Spartanburg Scholarship ($1,000)
Emily Ann Ellis (MUSC)

Greenville County Medical Society Scholarship ($3,000)
Bronwen Elizabeth Sanderson (USCSOM)

Lexington Medical Association Scholarship ($2,000)
Christie Pees Thomas (MUSC)

Pickens County Medical Society Scholarship ($3,000)
Daniel Bascom Ward (USCSOM)

Dr.’s Swift and Susanne Black Scholarship ($1,000)
John Tompkins Ramey (MUSC)

M. Gordon Howle, MD Scholarship (3@ $2,000 each)
Brian Wells Shelley (USCSOM)
Joel Fuller Vaughan (MUSC)
Matthew Everett Bryan (MUSC)

The SCMAA began a fundraiser last summer, led by immediate past president Alexis Alia (Mrs. Richard T.), to increase scholarship funding to medical students. SCMAA annually budgets $6,500 for scholarships and with cooperation from each county alliance/auxiliary, *Rx Du Jour*, a cookbook, came into existence in a matter of weeks. Thanks to brisk sales, the Alliance was able to add an additional $7,500 to this year's scholarship fund. This additional money gave four very deserving medical students scholarships. A big thank you to each county alliance/auxiliary, friends, and family for a job well done.

We were so proud to represent the Alliance and show the "physicians of tomorrow" our financial support. Unfortunately, all students interviewed did not receive scholarships and remain in need of financial assistance. Funds raised from the sale of cookbooks for the 1999-2000 year will go into the scholarship fund for distribution next year. If you don't have a cookbook and want one, please call the SCMAA office at (803) 798-6207, ext. 232 and place your order. They will be delighted to assist you with your purchase. They make wonderful gifts and are a fundraiser the physicians' spouses of South Carolina can be proud of.

Do we have a responsibility for the future of medicine in our state? After serving on this committee, our answer is yes. We need to provide the means to help these students become the physicians of tomorrow in South Carolina. If we do not support them now, can we expect them to support our state in the future?

At the close of the scholarship presentation, Dr. March Seabrook, president of the SCMA Foundation, challenged these gifted students to one day sit in our chairs and take up the task of supporting medical students and our state, by becoming a part of the South Carolina Medical Association.

Winston Churchill once said "We shape our dwellings and then our dwellings shape us." We can help the future of medicine in South Carolina by investing in those students who will change medicine's future in our state and in our nation. Contact the South Carolina Medical Association Foundation to receive more information about the scholarship program. Let's be sure to do our part today, to secure that dwelling place of tomorrow!

Congratulations to our winners:

Jane G. Bottsford (Mrs. John E.)
Chairman, SCMAA Scholarship Committee

Carol Rampey (Mrs. Stanley A.)
Co-Chairman, SCMAA Scholarship Committee

Alice Caskey (Mrs. John T.)
1998-99 Chairman, SCMAA Scholarship Committee

Jane G. Bottsford (Mrs. John E.)
Chairman, SCMAA Scholarship Committee

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Gray Matter

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The full value of the annuity will be included in your gross estate for estate tax purposes. Any gain in the annuity will be subject to income tax because annuity cash values do not get a stepped-up basis at death. The result is that your heirs may receive only $.35 to $.40 for each annuity dollar because the balance will go to taxes.

Here's an example:

DESCRIPTION	AMOUNT	%
Value of Annuity	$500,000	100%
Estate Tax	$245,000	49%
Income Tax	$54,250	11%
Received by Heirs	$200,750	40%

The above example shows the taxes attributable to an annuity for a physician whose home, insurance, qualified plans, and other assets total $2,000,000. Her tax deferred annuity, for which she invested $100,000, is worth $500,000 at her death. She does not have a surviving spouse so her children are the beneficiaries of her annuity. Her children are in the 35% income tax bracket.

This physician did not need her annuity for retirement benefits because her retirement plan provided adequate income. With proper planning, she could have taken steps that would have resulted in far more money passing to her heirs with no loss of income or security to her.

If you and your spouse own deferred annuities that you never intend to spend during your lifetimes and would like this benefit to go to your heirs rather than to taxes, return this form for additional information.

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Tax Confiscation of Deferred Annuities

Views expressed herein are those of the authors and in no way represent SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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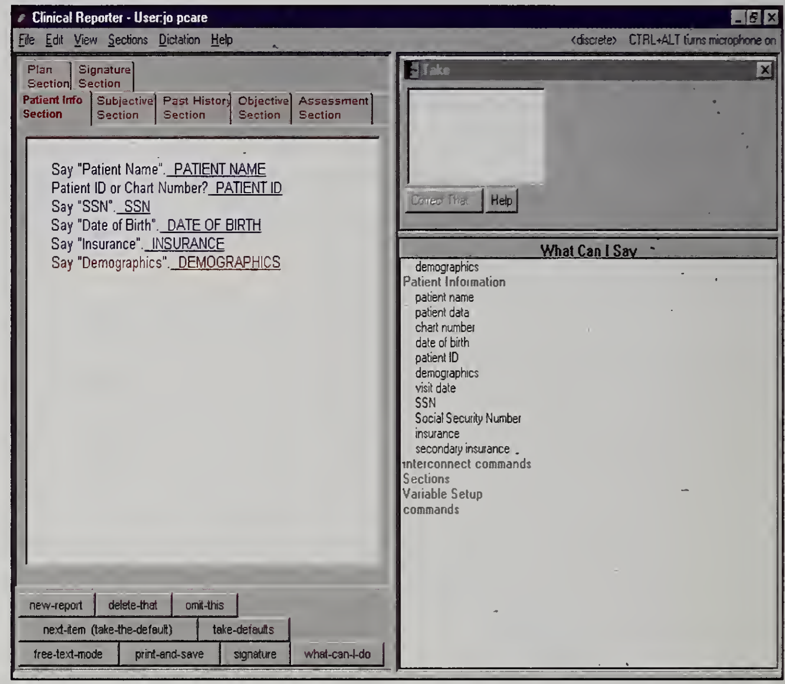

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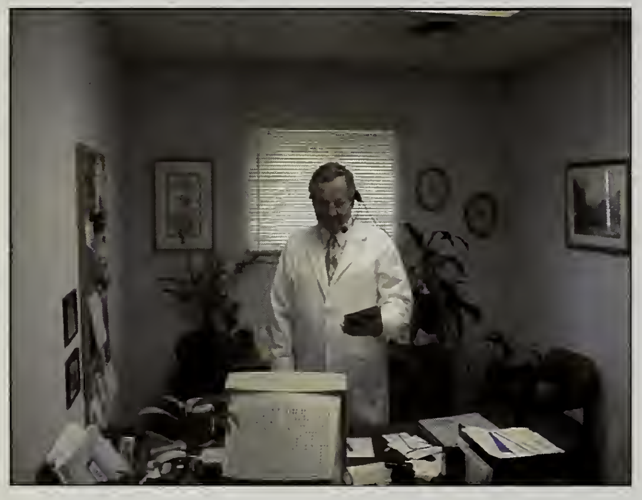

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The Journal

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VOLUME 95
NUMBER 7
JULY 1999
PAGES 249-286

PROMOTING PHYSICAL ACTIVITY AMONG IRREGULARLY ACTIVE SOUTH CAROLINIANS

EARLY CLINICAL EXPERIENCES FOR MEDICAL STUDENTS

PANIC DISORDER IN PRIMARY CARE

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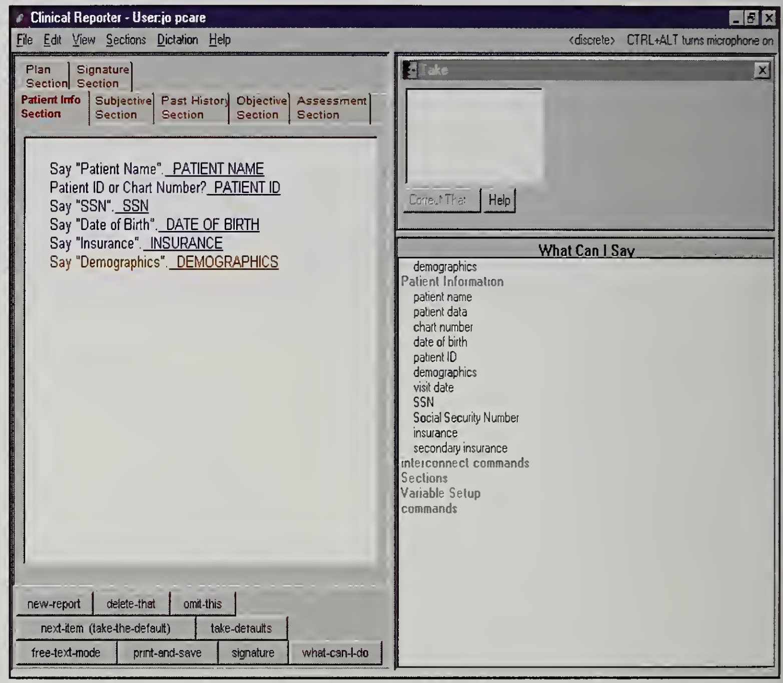

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Patient ID or Chart Number? PATIENT ID
Say "SSN". SSN
Say "Date of Birth". DATE OF BIRTH
Say "Insurance". INSURANCE
Say "Demographics". DEMOGRAPHICS

demographics
Patient Information
patient name
patient data
chart number
date of birth
patient ID
demographics
visit date
SSN
Social Security Number
insurance
secondary insurance
interconnect commands
Sections
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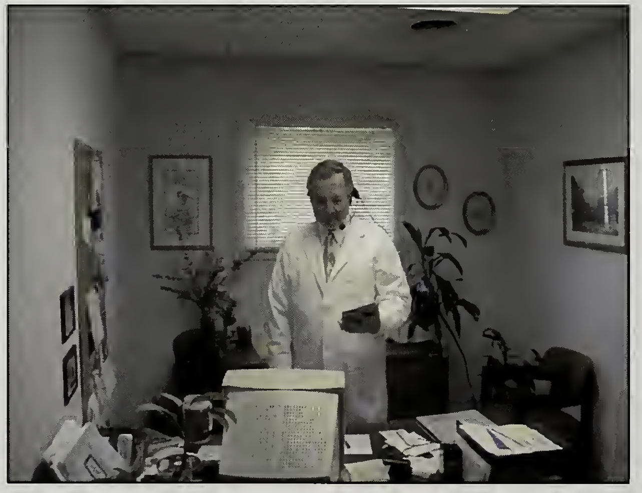
commands



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1999 LEGISLATIVE SUMMARY

The South Carolina General Assembly ended its 1999 session on Thursday, June 3, 1999. The SCMA enjoyed a successful but tough year. Although the session was dominated by the glitz of gambling and the promise of improvements in education, numerous bills affecting South Carolina physicians were introduced.

The SCMA's Interspecialty Council had its busiest year since inception. A total of 82 bills were brought before the council for a determination about the action SCMA should take. We are grateful to the physicians who served on this vital committee, often meeting three times per month during the legislative season.

The SCMA legislative agenda was marred only by the failure of the SC Senate to pass **H. 3403**, Rep. Alf Robinson, Republican-Pickens. This bill reduces the interest one must pay on a legal judgment while the case is on appeal. Currently, state law sets this rate at 14 percent. The SCMA, in a coalition with the SC Chamber of Commerce, the SC Manufacturers Alliance, and other major business groups, advocated changing this rate to ten percent. H.3403 dropped the rate to ten percent. The SC House passed the bill without objection and sent the bill to the Senate. The Senate recalled the bill from the Banking & Insurance Committee and placed the bill on the calendar with two weeks left in the session. Although the SC Trial Lawyers Association had agreed on the ten percent compromise, individual trial lawyers began contacting Senators and the bill was held on the Senate Calendar. The bill received second reading with two days left in the session, but we were unable to get the five Senators who continued to object to the bill to relent. The bill is still up for third reading when the legislature returns in January 2000, and passage as soon as possible will be the SCMA's number one priority.

On the positive side, a freshman legislator, Rep. Joel Lourie, Democrat-Richland successfully guided his first piece of legislation through both houses. His bill, **H.3498**, makes it a crime for any person or other entity to release data matching a patient with prescription information without the patient's consent. South Carolina is the first state to pass such a measure, and Rep. Lourie is to be congratulated on his efforts to protect patient privacy and the primacy of the physician-patient relationship.

S.7, the "Rad-Tech" bill, Sen. Linda Short, Democrat-Chester, also passed both houses this year. This bill requires every person who operates x-ray machinery in the health care setting to be certified by a non-profit organization, the SC Radiation Quality Standards Association. This organization will be composed of representatives of all parties affected by this law, including family practice, radiology, and the SCMA. The remarkable issue in this legislation is that quality of care will be addressed by the persons who employ radiographers and teach radiation technology without the requirement of dealing with a governmental licensing agency. Many radiographers currently practicing will be grandfathered under this law.

H. 3036, Representative Campsen, Republican-Charleston, would have banned cloning of human beings. Several physicians testified in hearings before the House Judiciary subcommittee on the bill. It became apparent that the bill's intent is also to forbid the use of any stem cells from a human embryo. The bill is still in subcommittee and will likely be debated again next year.

H. 3169, Representative Joe Brown, Democrat-Richland, would have required all pregnant women to be offered an HIV test in an effort to reduce the vertical transmission of HIV. If the woman refused the test, or if the newborn's HIV status was unknown at delivery, the newborn could have been tested stat without the mother's consent. The bill was tabled by the House 3M subcommittee.

H. 3240, Representative Bill Bowers, Democrat-Hampton would remove the current prohibition on podiatrists from amputating toes. The SC Orthopaedic Association provided excellent testimony in a series of hearings before the House 3M subcommittee and the bill was successfully carried over without action being taken.

S.200, Senator Verne Smith, Democrat-Greenville, would eliminate the current Patient's Compensation Fund Board of Directors and turn the fund over to the SC Department of Insurance. SCMA opposed the bill, and a hearing was never held on the bill. The Legislative Audit Council will conduct an audit of the agency during the summer of 1999 and a report will be made back to the legislature.

S. 388, Senator Larry Martin, Republican-Pickens, requires gunshot wounds treated in the ER to be reported to law enforcement authorities. This bill passed both houses and has been sent to the Governor for his signature.

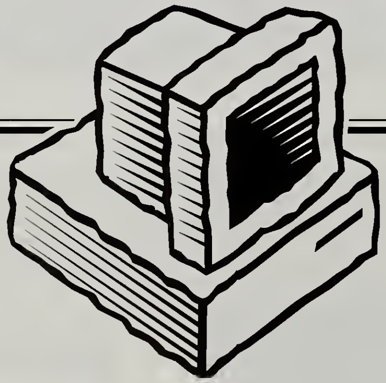
S. 562, Senator Tom Moore, Democrat-Aiken, requires all radiation therapy facilities to acquire a CON for construction and implementation. The bill passed both houses and has been signed by the Governor.

S. 728, Committee bill, Senate Medical Affairs Committee provides limited immunity for physicians who prescribe automatic external defibrillator devices. The bill passed both houses and has been sent to the Governor for approval.

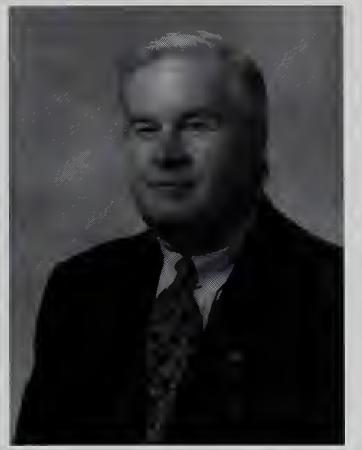
Several new bills were introduced at the end of the session. These bills will not have a hearing until the next legislative session begins in January 2000. There is a House bill H.4203 that requires a mother to report a fetal death to DHEC if the fetal death occurred outside of an institution and unattended by a physician. Rep. Pinckney has introduced H. 4212 which would enact the "Children's Health Act", which creates the Children's Medical Services Program to provide children with special health care needs and a comprehensive managed system of care.

On the Senate side, there is a new bill S. 836 that would make it illegal to sell over the counter weight loss pills, or distribute samples of such pills to an individual under the age of 21. Senator Glenn McConnell has introduced a bill that would endow an enrollee of an HMO with the right to sue the HMO for damages for refusal to allow treatment or payment or both, with respect to services or coverage. Sen. McGill of Williamsburg County has introduced a bill that would establish a SC Youth Smoking Prevention Commission.

During the Legislative Session, look for a weekly update of bill activity on the SCMA's website, www.scmanet.org.



President's Page



AFTER LOOKING WITHIN, LOOK AROUND

The work I have done in the SCMA over these past seventeen years has been for the improvement of healthcare in this state, for both physicians and patients. There are never enough physicians, especially young physicians, who will step forward to do this work so, it falls on the shoulders of a few of us. And, most often it is thankless work. However, those of us who do take leadership roles do so not for the "thanks," but for the betterment of the work environment for fellow physicians and patients. The same was true when I served my fellow physicians as President of the South Carolina Academy of Family Physicians in 1994-95.

In my role as the director of a residency program, I have tried to be a role model for the young physicians as they come for their training. However, no one ever knows what impact his or her efforts have on others. There are times when I see things happen or hear about the way a situation was or wasn't resolved properly that cause me to stop and wonder—what effect am I having? At times I feel, as do others, that nobody is watching what we try to role model. Nobody is listening to what we say and more importantly, how we say it!

Recently, I was made aware of a patient issue (as told to me by the patient) that occurred in a physician's office. This particular patient had fallen on very hard times—single mom, raising three children with only a part-time job and no group insurance. She had to go on Medicaid for the time being just to survive. She was sent to the office of a consulting physician twice but did not see the doctor on her first visit. On her second visit, small innuendoes and remarks by the staff about her "insurance" as well as other items, embarrassed her. As the physician moved between exam rooms, she asked when she was to be seen, simply wishing to make a case for the fact that this was her second trip away from her job and she had been waiting an inordinate amount of time. A staff member quickly and angrily chastised the patient and she was reduced to tears. She appropriately left the office.

I trust this type of situation never happens in your office! However, unless the physician leader lays out his/her expectations about how patients are to be treated, IT JUST WON'T HAPPEN BY ITSELF. Maybe you too try to be a positive role model but oftentimes, this is not enough!

This brings me back to my beginning. What else can I do to make this a better place? How can I make this a better environment for physicians and patients alike? I beg of you, if you have read this far, look at yourselves and your staff. See how patients in your office are treated. See how your staff treats each other. No, not medically treated but treated as human beings. If things are not right, correct them. If there are things to be improved, improve them. Don't leave this to your staff to do; you must be the one to take the leadership role.

Remember what Warren Bennis said in his book, *Leaders: The Strategies for Taking Charge*—"Managers do things right, leaders do the right things."

William H. Hester, MD

William H. Hester, M. D.
President

The Journal™ OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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July 1999
Number 7

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SCMA NEWSLETTER

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July 1999

MEDICAID UPDATE

Clarification on Reimbursement Policy for Medicare/ Medicaid Recipients

The January 11, 1999, Medicaid Bulletin, which outlined the reimbursement policy for dually eligible recipients, applies to non-covered charges due to medical necessity based on Medicare Local Medical Review Policies (LMRP). If Medicare has a LMRP in which the service or test is considered not medically necessary, then Medicaid will not pay the deductible and coinsurance for these non-covered charges.

The notice of non-coverage by Medicare to notify patients that the service (s) is not covered may also serve as the notification to the patient that Medicaid will not cover the service. If the patient is given advance notice of non-coverage then the patient may be billed for the non-covered charges.

New Telephone and Fax Numbers

Effective May 3, 1999, the phone and fax numbers for the South Carolina Department of Health and Human Services were changed. Of particular interest to you are the new numbers for the Division of Preventive Care, which oversees the following programs:

Medicaid Title XIX Transportation, Medicaid Rehabilitative Therapy Services, Dental, Vision, Chiropractic, Ambulance, Early Intervention, Sickle Cell, Diabetes Education, Genetics, School for the Deaf and Blind and Commission for the Blind Case Management, Applied Behavior Therapy, and the Developmental Evaluation Centers.

The **New Preventive Care Phone Number** is (803) 898-2655 and replaces (803) 253-6121. The **New Preventive**

(see Medicaid, page 2)

SCMA REACTION TO AMA HOUSE OF DELEGATES VOTE ON COLLECTIVE BARGAINING

On June 23, 1999, R. Duren Johnson, MD, Chairman of the SCMA Board, issued the following statement regarding the action that had occurred that day at the American Medical Association's House of Delegates meeting:

The American Medical Association's (AMA) House of Delegates has voted to immediately implement a national labor organization under the National Labor Relations Act and to support the development and operation of local negotiating units as an option for **employed physicians and for resident and fellow physicians who are authorized under state law to collectively bargain.** In addition, the AMA was directed to continue to **vigorously support antitrust relief for physicians.**

This action clearly demonstrates the frustration that physicians are experiencing with the current system of managed care in markets that are dominated by large insurers who seek to improve their bottom line and please their stockholders at the expense of patients and physicians.

The keyword is **option** and each member organization of the AMA will have to study this issue and determine what course is best for their state. This is true in South Carolina and the Board of Trustees of the South Carolina Medical Association will give careful consideration to this issue before deciding what action is appropriate for the medical profession in our state.

A full discussion of this issue and development of an official position of the SCMA is scheduled for the Wednesday, July 28 SCMA Board meeting.

SCMA WORKSHOPS

CODING ISSUES FOR PRIMARY CARE PRACTICES

August 5, 1999

This half-day seminar will address coding issues unique to primary care practices. Medicare and commercial carrier interpretations will be discussed. Actual chart notes will be utilized to demonstrate certain issues. Attendees will be given practical, workable solutions to apply in their practice to achieve optimum reimbursement while meeting all regulatory requirements. **Register by July 26, 1999.**

9:00 a.m. - 12:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

CODING ISSUES FOR SURGICAL PRACTICES

August 5, 1999

This half-day seminar will address coding issues unique to surgical practices. Medicare and commercial carrier interpretations will be discussed. Examples of operative reports will be utilized to demonstrate certain issues. Attendees will be given practical, workable solutions to apply in their practice to achieve optimum reimbursement while meeting all regulatory requirements. **Register by July 26, 1999.**

1:00 p.m. - 4:00 p.m.; Registration: 12:30 p.m.
Columbia, Clarion Town House Hotel

Space in each workshop is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, ext. 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

(Medicaid, continued from page 1)

Care Fax Number is (803) 898-4501, which replaces (803) 253-7512. Please make note of these new numbers and begin using them immediately. Questions regarding these changes may be directed to your Medicaid program representative at (803) 898-2655.

As a reminder, changes have been made to additional telephone and fax numbers within DHHS. These changes were originally published in the June 1999 issue of *The Journal*, but are being reprinted for your convenience.

Physician Services Telephone	(803) 898-2660
Physician Services Fax	(803) 898-2523
Hospital Services	(803) 898-2665
EPSDT	(803) 898-2660
DME Equipment & Pharmacy	(803) 898-2530
Provider Enrollment	(803) 788-7622, ext 41650

AMA ALERT

200th AMA Annual Meeting Adjourns

The 1999 Annual Meeting of AMA ended on Thursday, June 24, 1999. Dr. Randy Smoak, MD, was elected President-Elect of the organization—the first South Carolinian to ever hold this office! Keith Borg was also elected as a Delegate to the AMA Medical Student Section.

The House of Delegates took action on dozens of resolutions, ranging from private sector advocacy efforts to a new policy on stem cell research. Leading the news was the House's decision to support the formation of a national negotiating organization for physicians. For a closer look at the meeting, reference Walter J. Roberts, Jr.'s Report of the South Carolina Delegation included in this issue of *The Journal*.

PHYSICIANS CARE NETWORK UPDATE

Currently, there are 8,199 participating physician locations, 898 participating ancillary locations and 96 participating hospitals. PCN has 123 contracted groups with 64,656 covered lives. We will continue to provide information as contracts are received.

NEW GROUPS:

- Dempsey & Associates; effective 5/1/99
- Dependable Drum Company; effective 7/1/99
- Dudley Electric; effective 5/1/99
- Dave Edwards Toyota; effective 6/1/99
- Glenn Lawn Care; effective 6/1/99
- Internatioal Pavillion; effective 6/1/99
- Kerr Drug, Inc.; effective 5/1/99
- Oak Tree Medical; effective 5/1/99
- Oconee Urology, PA; effective 6/1/99
- Para-Chem Southern, Inc.; effective 8/1/99
- Sheet Metal Workers Local Union 399; effective 7/1/99
- Ray's Vacuum Center; effective 5/1/99
- Trotter & Sons; effective 5/1/99
- Unclaimed Furniture of Union; effective 6/1/99
- Tony E. Wilson; effective 6/1/99

TERMINATIONS:

- Harnes Music; effective 4/1/99
- Transition Management; effective 3/31/99

Note: Effective August 1, 1999, the new address for PCN claims is: ***PCN; P.O. Box 101111, Columbia, SC 29211-1111.***

If you have questions about PCN, please contact Judy Legg, Network Coordinator, PCN at (803) 798-6207, extension 257 or statewide at 1-800-[illegible]7-1021. You can also send an e-mail message to judy@scmanet.org.

IS YOUR OFFICE READY FOR Y2K?

PMSI can help! Let us come into your office and review your computer system to help you determine whether your office can handle the year 2000 bug. This kind of systems analysis is key to a safe transition into the new millenium. If there is a problem, let us help you discover and correct it before the bug gets you. ***For more information, call Anne Harvin Gavin at (800) 327-1021, extension 260.***

CORRECTION

In the May 1999 issue of the *SCMA Newsletter*, the summary of Resolution Number F-6, involving the *Sale of Non-Health Related Goods From Physicians Offices*, was not complete.

The amended resolution was approved, then adopted as policy by the House of Delegates, stating that the SCMA oppose the solicitation of patients in the medical arena to participate in pyramidal distributorships and the sale of non-health related goods in the practice arena except for the profit of community organizations as described by AMA policy E-8062. The second part of the action was to refer it to the SCMA Bioethics (Medical Ethics) Committee for further development.

DATE CHANGE FOR RISK MANAGEMENT SEMINAR FOR NEW PHYSICIANS

The date for the fall Risk Management Seminar for New Physicians will be held **Friday, October 8, 1999**, instead of the previously announced date of October 22, 1999. There will be a session from 9 a.m.-12:00 p.m. and an additional seminar will be held from 1:00 p.m.-4:00 p.m. *For more information or to register, contact Melissa Hamby at (800) 327-1021, ext. 253.*

2000 Fee Schedules and Pricing Updates

To maintain the integrity of Y2K validation efforts that will occur in the summer and fall of 1999, Medicare will delay the implementation of the fee schedules and other annual updates listed below.

Palmetto Government Benefits Administrators, LLC will hold claims with dates of service on or after January 1, 2000 until the first production cycle after January 16, 2000. The period of time that claims will be held for year 2000 dates of service will count toward the payment floor* and the 30-day ceiling for paying interest on clean claims. PGBA will release those claims being held and process them using the calendar year 2000 fee schedule. Claims with dates of service **prior to** January 1, 2000 will be processed as normal using the fee schedule applicable for that date of service.

**The legislative requirement that PGBA delay payment of electronic claims for 13 days and paper claims for 27 days.*

Fee Schedules and Related Annual Updates to be Delayed

- All Coinsurance and Deductibles
- Ambulatory Surgical Center Update
- Claims Processing Timeliness Interest Rate
- Durable Medical Equipment Prosthetics and Orthotics Fee Schedule
- HCFA Common Procedure Coding System Update (HCPCS)
- Inherent Reasonableness Update
- Laboratory Fee Schedule
- Medicare Physician Fee Schedule
- Reasonable Charge Update (Ambulance Services, Certain DME Supplies, Blood Supplies/ Transfusion Medicine)
- Screening Mammography Limit Update

The dissemination of information for these fee schedules and updates will continue on the normal schedule. All activities involved with the participation enrollment process will follow the normal schedule as well.

Medicare Advisory Subscription Update

Palmetto Government Benefits Administrators, LLC sends one *Medicare Advisory* per physician group. They send the *Medicare Advisory* to your billing address. If you want additional copies, or a copy mailed to a different address, you must subscribe by completing an order form and paying the $50.00 subscription fee. The order form is on Page 4 of the June 1999 *Medicare Advisory*.

Don't forget you can access the Medicare Advisory free through their website at **www.pgba.com**. After accessing PGBA's website, just click on Providers/Part B Carrier/Publications and Information/Advisories.

Monitored Anesthesia Care (MAC)

Temporary national modifiers have been established to allow monitored anesthesia care (MAC) for complex, complicated or markedly invasive surgical procedures for at-risk patients. The effective date for implementation and use of the G8 and G9 modifiers was July 1, 1999.

G8 - monitored anesthesia care for deep, complex, complicated, or markedly invasive surgical procedure
G9 - monitored anesthesia care for patient who has history of severe cardio-pulmonary condition
QS - monitored anesthesia care services (not specified above)

Automatic Defibrillators

Medicare covers the implantation of an automatic defibrillator for patients who have a documented episode of life-threatening ventricular tachyarrhythmia or cardiac arrest not associated with myocardial infarction. This service has been covered since July 1, 1991.

Effective for services performed on or after July 1, 1999, the implantation of an automatic defibrillator is also a covered service for patients with the following conditions:

1. A documented episode of cardiac arrest due to ventricular fibrillation not due to a transient or reversible cause
2. Ventricular tachyarrhythmia, either spontaneous or induced, not due to a transient or reversible cause
3. Familial or inherited conditions with a high risk of life-threatening ventricular tachyarrythmias such as long QT syndrome or hypertrophic cardiomyopathy

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PROMOTING PHYSICAL ACTIVITY AMONG IRREGULARLY ACTIVE SOUTH CAROLINIANS: BRFSS 1994-1996

BARBARA E. AINSWORTH, Ph.D., MPH*
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FRAN C. WHEELER, Ph.D.
DENNIS SHEPARD, MAT

INTRODUCTION

Research has shown that participation in regular physical activity may result in health benefits such as decreased mortality rates, decreased risk of developing cardiovascular disease, colon cancer, and non-insulin-dependent diabetes mellitus, improved mental health, and improved health-related quality of life.[1] Regular physical activity has a favorable effect on body fat distribution and also is important in maintaining normal muscle strength, joint structure, and joint function. The importance of physical activity as a health promotion strategy was highlighted in 1996, when the Surgeon General released the landmark report titled: "Physical Activity and Health."[1] The main message of the report is that Americans can achieve significant health benefits and improved quality of life by incorporating moderate physical activity into their daily lives. The Surgeon General's report builds on recommendations adopted in 1993 by the Centers for Disease Control and Prevention (CDC) and the American College of Sports Medicine (ACSM) that "all adults should accumulate 30 minutes or more of moderate activity on most, if not all, days of the week."[2] Moderate activity, as defined in the Surgeon General's report, encompasses a wide variety of activities including gardening, brisk walking, home repair, and recreational sports. Thus, 30 minutes of moderate physical activity, five days per week is a goal that should be achievable for most Americans.

The 1994-1996 South Carolina Behavioral Risk Factor Surveillance System survey (BRFSS) was examined to identify the physical activity characteristics of South Carolina's adult population. This report describes the physical activity patterns of irregularly active adults in South Carolina in order to increase physicians' understanding of how they can help to improve physical activity participation among their irregularly active patients.

---

* Address correspondence to Dr. Ainsworth at Prevention Research Center, USC School of Public Health, Columbia, SC 29208.

Table 1. Prevalence of irregular activity by sex, race, and age—South Carolina BRFSS 1994-1996 (n=2,938)

	Low frequency and low duration (n=1,880)	Low frequency (n=867)	Low duration (n=191)
All	**30.1%**	**15.3%**	**3.3%**
Men			
White	**28.3%**	**20.0%**	**2.9%**
Nonwhite	**29.2%**	**16.4%**	**4.4%**
Women			
White	**32.9%**	**12.3%**	**3.7%**
Nonwhite	**28.3%**	**11.2%**	**2.3%**
Age (years)			
18-44	**30.9%**	**17.7%**	**3.0%**
45+	**29.0%**	**12.1%**	**3.7%**

METHODS

The BRFSS is an ongoing national survey that asks respondents about their health behaviors, including information about participation in physical activity. The survey was developed by the CDC to assist state health departments in identifying modifiable risk factors.[4] BRFSS data are collected from adults age 18 years and older using random digit dialing sampling to conduct phone interviews. Data from a sub-sample of South Carolina residents (n = 5,993) who participated in a telephone interview between 1994 and 1996 were analyzed for this report.

Physical activity status was determined from the respondent's reporting of the two most common physical activities performed during the past month. The recommended amount of physical activity is $\geq$ five days per week and $\geq$ 30 minutes per session. Irregular physical activity status was defined as participating in some physical activity, but less than the recommended amount. Irregular physical activity was examined further to determine participation patterns by race and sex groups, with race categorized as White (n = 4,464) and Nonwhite (Nonwhite = 1,529) and age divided into 18-45 years and > 45 years. Descriptive analyses were weighted using SUDAAN statistical software[5] to account for the complex sampling design.

RESULTS

Approximately one half of South Carolinians (48 percent) were classified as irregularly active, while nearly one third of adults were completely sedentary. Less than one fifth of adults were active at recommended levels. Table 1 shows physical activity patterns for irregularly active South Carolinians by sex, race, and age. Among irregularly active adults, 30 percent did not meet the recommendation for frequency or duration. Adults who did not meet either recommendation reported averages of only one to two days per week and only twelve minutes per day of activity. Fifteen percent met the recommendation for duration but not frequency. Adults who did not meet the recommendation for frequency reported an average of only three days per week in activity. Three percent met the recommendation for frequency but not duration. Those who did not meet the recommendation for duration reported averages of between 16 and 20 minutes of activity per session. Physical activity participation patterns varied by race and sex.

Figure 1 shows the most common types of activities reported by irregularly active adults. The activities performed most frequently were walking, conditioning, home/yard work, and recreational activities. Between 42 and 72 percent of respondents reported walking and between 16 and 28 percent reported conditioning activities as their most frequent activities. Walking and conditioning were the most prevalent activities among Nonwhite men and White and Nonwhite women, with Nonwhite women participating in the most walking (72 percent) and Nonwhite men participating in the most conditioning (30 percent). Recreation, home/yard, and jogging activities were reported less frequently. The prevalence of these activities is similar to those reported on the BRFSS among adults in other states.[1] Since the BRFSS does not ask about physical activity patterns at work, caring for children and others, or house cleaning and/or home maintenance activities, it is possible that South Carolinians are obtaining additional amounts of activity in setting that are not assessed on the BRFSS questionnaire.[4]

DISCUSSION

Provider-based physical activity counseling programs can help prevent chronic diseases and disabilities among patients and help reduce health care costs associated with sedentary and irregularly active lifestyles.[1,3] In their 1994 paper, Powell and Blair noted that if everyone in the United States made small increases in physical activity, mortality from coronary heart disease, colon cancer, and diabetes, which are responsible for about one-third of all deaths, would be reduced by as much as 30,000 - 35,000 deaths/year.[9] In South Carolina, it is estimated that if sedentary and irregularly active adults increased their physical activity to the levels recommended by the Surgeon General, mortality from coronary heart disease could be reduced by as much as 21 percent.[10] Thus, reduced mortality can result from strategies aimed at encour-

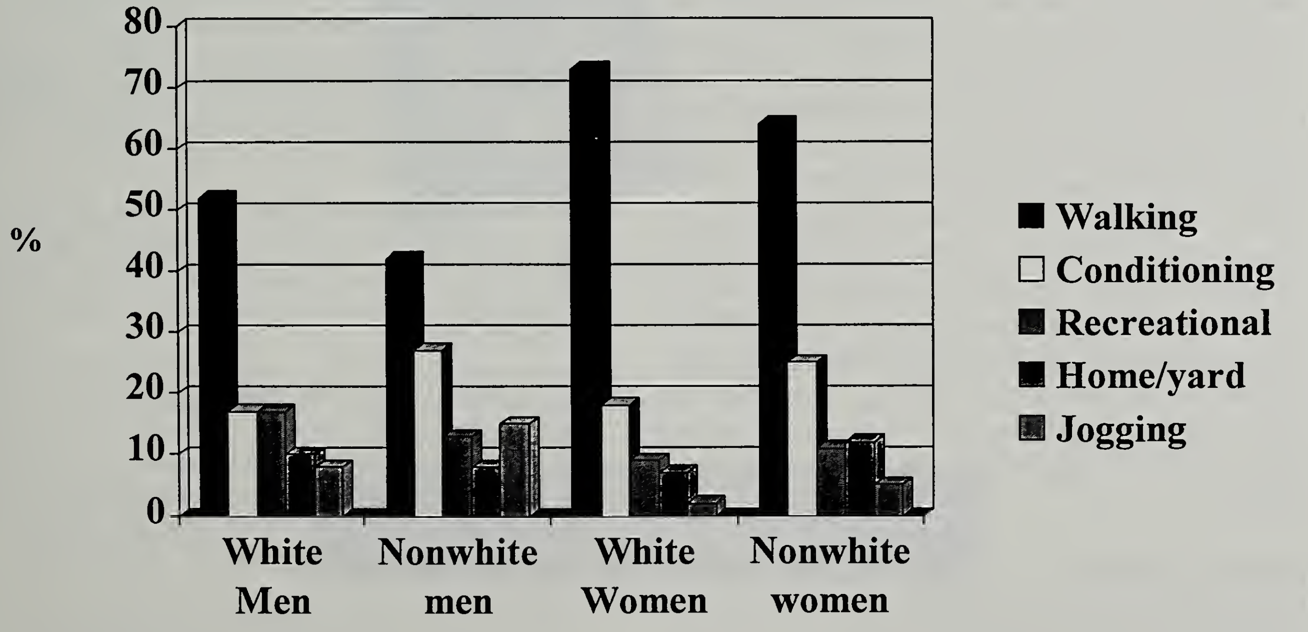

Figure 1. Activity preferences of irregularly active South Carolinians by race and sex

aging sedentary and irregularly active adults to increase their participation in moderate activity to at least 30 minutes/day on at least five days/week.

Physicians can play a vital role in encouraging adults to engage in physical activity if they are aware of the current physical activity and health practices of their patients. It is best to invest health promotion strategies and resources in those persons who are most likely to change their behavior patterns, according to social marketing theory.[3] Adults who engage in some physical activity, but not on a regular basis, are more likely to become regularly active than those adults who engage in no physical activity.

Several studies have documented the effectiveness of using physician-based counseling to increase physical activity in patients.[6, 7] One of the most successful health care provider-based physical activity counseling programs is Project PACE (Patient-based Assessment and Counseling for Exercise). PACE involves three to five minutes of individualized physician-patient counseling about the importance of regular exercise, the benefits of moderate activity, and concerns about injuries or distress caused by physical activity. Written materials about the benefits of physical activity are mailed to patients' homes within a week of the office visit and patients are also given a ten-minute "booster" phone call designed to answer questions and provide motivation for regular physical activity. In experimental studies of Project PACE, patients in counseling intervention groups were more active in walking programs as compared with patients in non-counseling control groups (37 minutes/day vs. seven minutes/day in walking activities). During follow-up physician visits, patients who received PACE training were more regularly active in various activities as compared with control group of patients who were not as physically active (52 percent vs. 12 percent, respectively).[7, 8]

CONCLUSION

Nearly half of South Carolinians are attempting to be physically active, but they continue to fall short of the recommended amount of activity needed to reduce risks for chronic diseases and disabilities. Physicians can reinforce irregularly physically active patients for their efforts to be active and encourage them to engage in physical activity more frequently at least five days per week and/or to perform these activities for at least 30 minutes/day. Health care providers have a vital role in ensuring that their patients obtain the recommended levels of physical activity, which can make a big difference in the patient's quality of life and burden of disease.

ACKNOWLEDGEMENTS

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Materials for the PACE program may be ordered from: Project PACE, Student Health Services, San Diego State University, 4400 Campanile Drive, San Diego, CA 92182-4701. FAX: (619) 594-5613.

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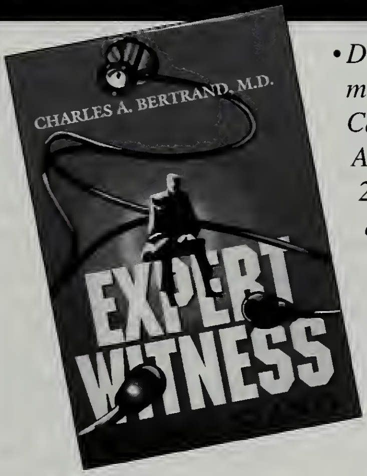

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SOUTH CAROLINA PHYSICIANS PROVIDE EARLY CLINICAL EXPERIENCES FOR MEDICAL STUDENTS

IMOGENE K. SMITH, Ed.D.*
MELISSA H. HUNTER, M.D.
M. KATHLEEN WILEY, MD

Medical students across the United States are welcomed into physician's offices to learn about the "real" world of ambulatory care medicine more and more frequently.[1] A contributing factor to this trend is the call by major US medical education organizations such as the American Association of Medical Colleges (AAMC) to ask community physicians to contribute to the education of medical students.[2] To be most relevant for the next century, medical education must provide a balance between hospital-based, subspecialty training, and community - based, primary care training.[3] In South Carolina, medical students are showing up in physicians' offices as novice freshman in addition to more experienced third and fourth year students. Early clinical experiences are particularly beneficial for freshman medical students because they gain an appreciation for the relevance of the basic sciences and their direct application to the clinical problems of patients. Students also experience the diversity of patient problems inherent in an ambulatory care practice and often find it more challenging than they had previously assumed.

Description of an early clinical experience

In one program at the Medical University of South Carolina, the Parallel Curriculum (PC), medical students spend three to five half days per week in a family medicine, internal medicine or other primary care practice for six weeks at the end of their freshman year, during the months of May and June. During this "Intensive Community Experience" (ICE) students are expected to learn in a variety of ways. First, students have direct patient contact, taking a history and doing a physical exam on at least one patient per half day. Following this encounter, the student presents the patient to the physician-preceptor and receives feedback on interview and physical examination techniques, when observed, as well as the ability to reason through a clinical problem. Students also receive anonymous written feedback on their interpersonal and listening skills from selected patients. Using a variety of resources, students study basic science topics emanating from their patient encounters. For example, if a student interviews a 60-year-old patient who has broken her hip, s/he will study calcium metabolism and bone regeneration and growth. Since the student knows the patient and she may return for a follow up visit with the student, the topic of bone regeneration and growth becomes personally relevant, providing an important "need to know". Students also investigate a community resource, which is being used or could be used, by a specific patient seen in the practice. For a patient with AIDS, the student might investigate AIDS services available in the community. In addition to sharing the information with the patient if it is appropriate, the student presents formal written and oral reports to fellow students and faculty upon return to MUSC. The report discusses the community resource as it relates to the population served, the cost of services and source of funding, linkage to the provider and benefits to the patient.

In addition to patient contact, the study of basic and clinical sciences, and investigation of a community resource, students look forward to participating in a variety of other learning activities. Students often round with the physician on home or hospital visits, gaining valuable insights from an experienced role model. Students participate as an observer and/or helper in minor surgery, births, and other procedures common in a day to day primary care practice. Over the span of six weeks, students begin to value the continuity of care offered by a community physician and the breadth of knowledge needed to be a competent generalist. The quality of family and professional life is also important to students, and invitations to professional meetings or other aspects of the physician's "life after work" are welcomed. When asked, students often reply that their most rewarding experience during ICE was "developing a relationship with a community physician."

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While in the community practice, the student is visited twice by an MUSC clinical faculty member, called a circuit rider. The purpose of the circuit rider is to be a counselor or advisor to the student, to evaluate certain aspects of the student's performance and to serve as liaison between MUSC, the student and the community physician as needed. MUSC circuit riders have enjoyed meeting community physicians across the state and helping to provide a "bridge" for students to realistic primary care practice.

Preparation for an early clinical experience

The Parallel Curriculum (PC) program is designed to prepare freshman medical students for early patient contact. The PC is a problem-based learning program for the first two years of medical school. This method integrates the learning of clinical and professional skills, clinical reasoning and the biological sciences concurrently. Clinical reasoning, beginning with a chief complaint and developing a differential diagnosis, is emphasized from the first week of the program. Curricular content is focused on the integrated learning of basic and clinical sciences through study of patient cases in small groups as well as "real" patients in clinical settings. Two faculty tutors, consisting of a basic scientist and a clinician, facilitate small group discussions for six students. In year one, "correlates" consisting of seminars and labs in gross anatomy, histology, pathology, biochemistry, and physical diagnosis provide students with opportunities to receive direct instruction from content experts in these areas.

Freshman PC students learn basic physical diagnosis and interviewing skills through lecture-demonstrations and monitored practice on each other during the first ten weeks of medical school. A faculty physician observes each student doing a history and physical (H&P) on a standardized patient, a person acting in the role of a "sick" patient. The faculty physician evaluates the student's skills and provides immediate feedback. Subsequently, students attend primary care ambulatory clinics within the university to interview and perform focused physical exams on patients for a total of eight weeks during the year. By the conclusion of the freshman year, students have been evaluated three times by a faculty physician while doing an H&P on a standardized patient. In addition, they have participated in several standardized patient H&Ps as part of small group learning, and they have been taught by faculty preceptors while on outpatient clinical experiences within the university. PC students know their boundaries and are self-motivated. In turn, these qualities make them "low maintenance" students for the community physician.

Benefits to the community physician

With medical students eager to learn and enthusiastic about patient care, many physicians participating as ICE preceptors look forward to having a PC student year after year. The benefits for the physician and practice are both tangible and intangible. Patients enjoy the interaction with a novice student physician and frequently realize how much they have to "teach" a medical student. Patients often provide valuable encouragement to the student through sharing of their patient stories as well as feedback about how the student can be a better listener. Furthermore, the student may be "home grown," having been a patient in the practice as a child or with family ties to the physician. The entire event becomes good public relations for the practice when the local newspaper publishes a human-interest story, as has happened in several communities since the inception of ICE in 1994.

More tangible rewards for the community physician are the "perks" offered by the PC program. These include a free registration to a Continuing Medical Education conference sponsored by the College of Medicine within the year following participation, an opportunity to connect with MUSC library On-line Information Services, an invitation to apply for a clinical faculty appointment with the College of Medicine, and eligibility to apply for American Medical Association Physician's Recognition Award (PRA) category two credit for the hours spent mentoring a medical student. Infor-

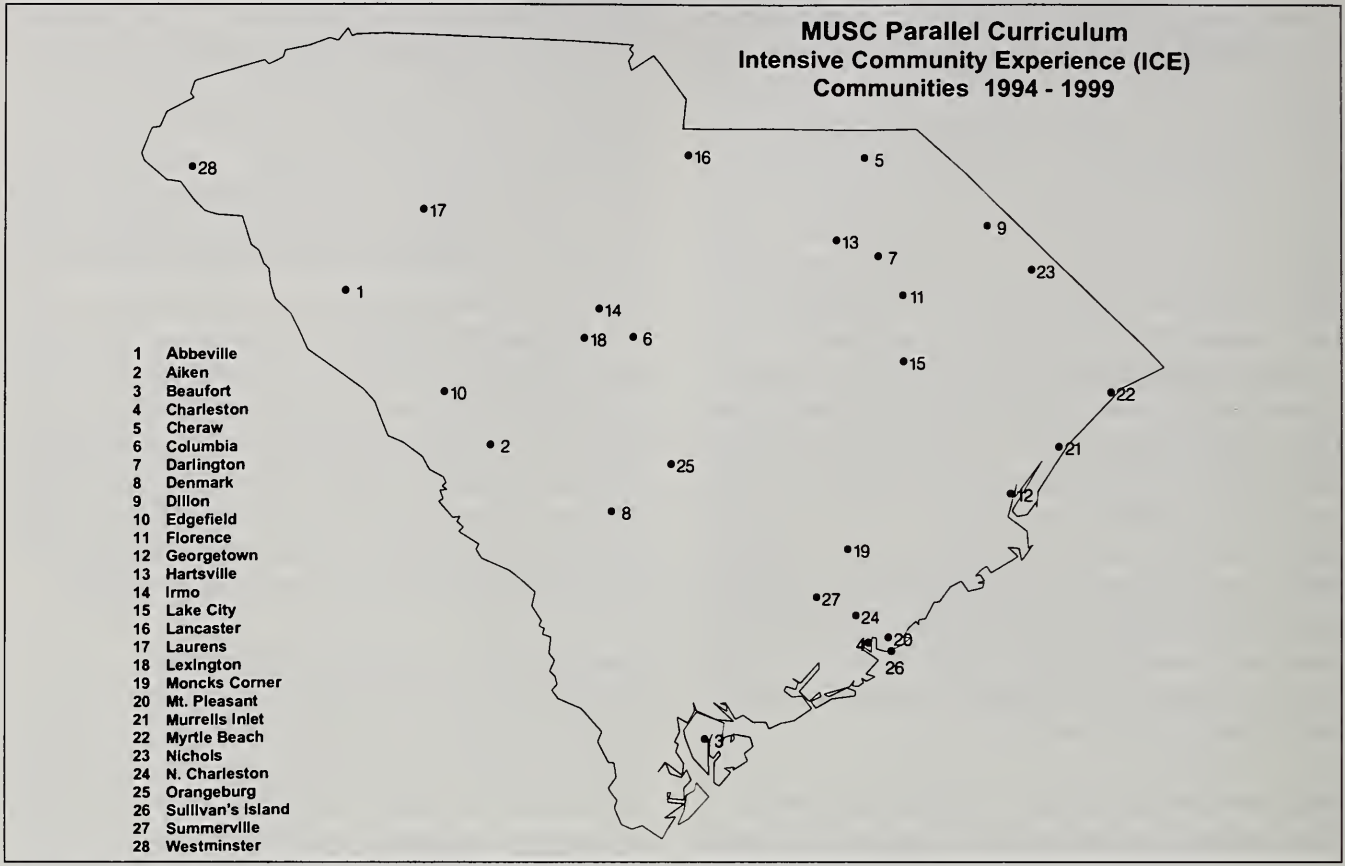

Figure 1. MUSC Parallel Curriculum Intensive Community Experience (ICE) Communities 1994-1999

mally, several participating group practices have found that student presentations at practice conferences have served as refreshing review sessions on basic science topics that were particularly relevant to their clinical practice. Many ICE preceptors have agreed to have a PC student in their practices year after year, an indication of their comfort with the students' professionalism and preparation for the experience and, hopefully, benefits for the practice.

The community may also benefit by recruiting new physicians to the area and by programs investigated or developed in relation to the student's community project. One student investigated and proposed a plan for a cardiac rehabilitation program in the small community where he was located after learning that patients comply with rehabilitation better when the program is close to where they live.

Summary

Primary care community physicians and their patients across the length and breadth of South Carolina (figure 1) have provided early clinical experiences for PC students. The experience for students has been so beneficial that early clinical experiences are planned for all MUSC freshman students in the coming academic year. Primary care physicians have much to offer physicians in training. Persons who are interested and/or need additional information may contact Dr. Smith at smithik@musc.edu or call 1-800-470-6696.

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HEALING THE OVERACTIVE ALARM BELL: THE TREATMENT OF PANIC DISORDER IN PRIMARY CARE

DEAN SCHUYLER, M.D.*

It has long been known that anxiety and nervousness account for a significant proportion of complaints made to primary care physicians.[1] Moreover, a small number of patients in primary care settings account for a large percentage of ambulatory care visits. In our Charleston County clinic population, a recent survey[2] documented the fantastic figure of 27 percent of our patients meeting criteria for one particular form of anxiety problem: panic disorder. Primary care physicians have not done a good job making this diagnosis,[3] and we hadn't either.

The key to recognition of a panic attack is a history of *episodic anxiety*. Often, these patients are not generally nervous, nor are they "worriers." Rather, they report discrete periods of autonomic symptoms: palpitations, sweating, trembling, nausea, dizziness, flushes, and parathesias. These are often dominated by shortness of breath and/or chest pain. They are accompanied by the anticipatory dread of the next panic attack, and typically cause serious vocational, social, and personal dysfunction.

People with disturbing, unfamiliar sensations naturally seek explanations for them. In American culture, a fear of dying, having a heart attack, fainting, or "going crazy" are predominant meanings. In the primary care setting, the patient will often choose his or her most frightening symptom (eg., chest pain, dyspnea) and present it as a solitary complaint.[4] The purpose of this article is *not* to advocate for a diagnosis of panic disorder in every patient presenting with shortness of breath or chest pain. It is, rather, to urge physicians to add this syndrome to the list of differential considerations when relevant symptoms are reported.

One way of understanding panic disorder sees the physiologic arousal as an instinctual reaction ("alarm bell") to an anticipated danger. The problem for the patient in this case, however, is that the "alarm is worse than the fire"—and there is no fire. A recent case example from our clinic well illustrates the challenge of diagnosing panic disorder in the general medical setting.

Case Presentation

Recently, a 42-year-old, married, African-American woman presented to the APCC to "establish primary care." Relocated to Charleston, she reported a history of asthma and anemia. Her central complaint, however, concerned episodes of palpitations associated with nervousness. She related shortness of breath and wheezing to her asthmatic condition. Her pulmonary function was evaluated, along with a work-up for anemia. To pursue the possibility of vasovagal episodes, an ekg was ordered, along with serum electrolytes. Thyroid studies were drawn along with a basic metabolic panel.

She returned in one month, reporting that her asthma was under better control with the use of inhalers. Blood studies, thyroid tests, and electrolytes were all normal. However, she told of further episodes of "near syncope," leading to several emergency room visits. She now described chest pain and sweating, along with palpitations and a fear of losing consciousness. The diagnosis of panic disorder was made, and paroxetine (Paxil) was prescribed at a dose of ten mgms. The internist had consulted the clinic psychiatrist and together, they had agreed on this course of action, despite lingering diagnostic uncertainty on the internist's part.

Paxil was sequentially increased weekly to 20 mgms. The patient returned one month later reporting no further episodes. The internist now favored panic disorder as a likely etiology. The patient was next seen after three months had gone by. Acknowledging some recent life stresses, she noted that "those episodes" had returned. She now described them as: feeling faint, with air hunger, lightheadedness, paresthesias, and chest pain. It was decided to increase paroxetine to 40 mgms. An echocardiogram was ordered to check for cardiac valvular abnormalities along with an events monitor to see if arrhythmias were associated with the episodes. The patient was referred for further psychiatric evaluation to the Community Mental Health Center.

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After six weeks, the patient returned to the APCC. There were no further anxiety episodes reported. Echo revealed mild tricuspid regurgitation and the events monitor was normal. Her psychiatric evaluation now complete, the patient had started a brief psychotherapy treatment. The plan was to continue paroxetine at 40 mgms., with a follow-up appointment at six months.

Discussion

Panic disorder incorporates a *genetic* aspect (30 percent of first degree relatives have PD), a *stress-related* aspect (PD patients endorse more stressful events in the previous six months), and a *phobic* connection (fears and avoidances, hypochondriases and hypervigilance may accompany the syndrome.)[4] Its etiology, today, is traced to the same serotonergic system that has been associated with depressive disorders.[5] The most common somatic presentations are cardiovascular (chest pain, tachycardia), gastrointestinal (pain, diarrhea), and neurological (headaches, dizziness Many of these patients receive repeated and costly diagnostic tests. Commonly, panic disorder occurs co-morbid with chronic medical illnesses like diabetes, heart disease and hypertension. An association has been suggested with irritable bowel syndrome.[7] The diagnostic criteria are elaborated in Table 1.

The obstacles to recognizing panic disorder in the general medical setting have been well-documented. The typical patient-physician contact in primary care is brief; the demand characteristics support medical causality; often there is poorer reimbursement for psychiatric diagnoses.[8] Psychiatric consultation may be unavailable; there may be a time delay before consultation, patient compliance with referral is often poor; some patients will refuse the referral because of stigma.[9] The value of having a psychiatrist on site, who will see the patient immediately after the internist, seems indisputable.[9]

Table 1. Diagnostic Criteria for Panic Disorder*

I. Four (or more) symptoms developed abruptly and reaching a peak within ten minutes.

1. **palpitations**
2. **sweating**
3. **trembling**
4. **dyspnea**
5. **choking**
6. **chest pain**
7. **nausea**
8. **dizziness**
9. **feeling of unreality/detachment**
10. **fear of losing control/going crazy**
11. **fear of dying**
12. **paresthesias**
13. **chills/flushes**

II. Followed by at least one month of:

1. **anticipatory anxiety (about future attacks)**
2. **worry about the attack's consequences**
3. **a significant behavior change, related to the attacks**

*** Adapted from : APA. *Diagnostic and Statistical Manual of Mental Disorders*. (Fourth edition)
Washington: APA., 1994.**

While the treatment options are numerous: tricyclic anti-depressant drugs (eg. imipramine), MAO-inhibitors (eg. phenelzine), and high potency benzodiazepines (eg. clonazepam), selective serotonin re-uptake inhibitors (SSRIs) are today's treatment of choice. While doses of these compounds are often low in the treatment of major depression (paroxetine, 20 mgms; fluoxetine, 20 mgms; sertraline, 50-150 mgms.), panic disorder requires more medication (as seen in the case report.) For Paxil, the dose maximum is 50 mgms; for Prozac, a range of 40-80 mgms; for Zoloft, up to 200 mgms. The typical treatment protocol starts with a low dose (as in the case presented) respecting the panic disorder patient's tendency to be hypersensitive even to transient drug side effects.

Brief psychotherapy, especially cognitive therapy, is often prescribed concurrently, and has been successful even in the absence of medication.[10] This approach targets the meanings patients assign to their physiological symptoms. In addition, it seeks to correct the catastrophic inferences and overestimates that are characteristic in the context of a panic attack.

It has been shown that 70-80 percent of panic disorder patients respond to medication and/or brief psychotherapy. When this does not occur, a referral to a specialty program is a wise course to follow. Panic disorder is a chronic and recurring condition that typically requires long-term management. An adequate duration of chemotherapy treatment is one-two years. When discontinuing successful drug therapy, a slow, planned taper is recommended.

It is evident that panic disorder presents at a significant frequency in primary care settings. I urge the general internist to learn to recognize it, work collaboratively with a psychiatrist to treat it, and teach students to think of it at appropriate times. We must work together to confine the alarm bells to the fires of reality, rather than to those of imagination.

Summary

Panic disorder is frequently encountered in primary care settings. Its presentation is easily confused with cardiac, endocrinological, or neurological disorders. The key to its recognition is the presence of episodic anxiety.

Once diagnosed and explained to the patient, the syndrome is readily treatable in most cases. Selective serotonin re-uptake inhibitors (SSRIs) are today's treatment of choice, in doses higher than those utilized for depression. Brief Cognitive Therapy, prescribed concurrently, helps to dispel the disorder's catastrophic inferences and overestimates.

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THE ANNUAL MEETING OF THE AMA
CHICAGO, ILLINOIS
JUNE 20-24, 1999

WALTER J. ROBERTS, JR., MD,*

The Annual Meeting of the House of Delegates of the American Medical Association (AMA) was held in Chicago on June 20-24, 1999. As with all AMA meetings, many important problems and issues were discussed and voted upon, and I will once more highlight and comment upon several of them.

It is my great pleasure to tell you, before other things are reviewed, of a singular event of historical, epochal note which occurred; namely, the election of Dr. Randolph D. Smoak of Orangeburg, SC to the office of president-elect of the American Medical Association. Randy has been a member of the South Carolina delegation since 1982 and a member of the AMA Board of Trustees since 1992. He moved through the board's elected positions to its chairmanship last June, and he has served this association and the physicians of this country with ability and distinction this past year. AMA was organized in 1847 and after 153 years of its existence, Randy is to become, in June of next year, the first South Carolinian elected to its presidency. It goes without saying that we are all very proud of Randy. It is my opinion that Randy will be a great and popular president. South Carolina and especially South Carolina physicians should savor a proud moment in medical history.

The meeting was attended by members of the South Carolina AMA delegation, whose names are listed in the front of *The Journal*, including our newly-elected alternate delegate, Dr. Duren Johnson of Lancaster. Also with us was our president, Dr. Bill Hester of Florence, who is an alternate delegate by virtue of his office this year. Staff assistance was once more provided by our CEO, Bill Mahon and our "new" COO, Ron Fitzwater. Without this superb staff, much of what your AMA delegation is able to participate in and achieve would not occur.

I have also mentioned to you in the past the involvement of specialty society delegates who work in close cooperation with your state delegates. Dr. Ed Kimbrough, Dr. Marion Burton, Dr. Greg Slachta, Dr. Jay Scully, Dr. David Osguthorpe, and now Dr. Steve Imbeau are as much involved as any of our own delegates in the activities of the AMA. With them, South Carolina is exceedingly well represented in this arena where policy is made, ethical opinions rendered, leaders elected, and collegiality established. I have remarked many times in the past several years that it is my belief that the strength of the AMA in the coming years will depend much on the interrelationships our state constituent societies can enjoy with the various specialty societies, all working together—without parochialism—for the benefit of our patients and all of the physicians of this country.

I would like to pay special note to Dr. Osguthorpe. David, who is Professor of Otolaryngology at MUSC, and also is a delegate from the otolaryngology society, was asked by the speakers to chair a very important reference committee at this meeting. David performed this difficult task with outstanding ability and was saluted at the House of Delegates for an excellent job. Also on the reference committee—and surely adding strength to their deliberations—was our own delegate, Dr. Carol Nichols. As with our House of Delegates at the SCMA Annual Meetings, the ability of the reference committees to perform well is critical to the success of each meeting, and to the success of the organization. Every member of the House of Delegates of AMA considers it a high compliment to be asked to serve on a reference committee and at almost every AMA meeting, some member of our delegation is asked to serve.

As I began relating to you the important issues and events of the meeting, one issue flies out immediately which demands explanation and discussion above all others: UNIONIZATION. Allow me to make this the first item for discussion, but allow me to give you some of the "background" which led to this difficult and con

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troversial announcement:

- There seems to be little doubt that the anti-trust laws, as delineated by the Sherman Anti-Trust laws, have been patently unfair to the medical profession. Physicians are the only group—the only profession—denied the right to "collectively bargain." This does not mean only with respect to payment for services rendered, but for such things as working hours, working conditions, and—in this era of insurance company and entrepreneurial interest dominance of much of health care decision-making—the ability to perform the very tasks for which we were trained in the practice of medicine.

In an effort to combat some of these unfair rules, the American Medical Association has sought legislative relief without success. It is known that AMA has been somewhat successful in "private-sector advocacy," often helping physicians in negotiations with insurance companies and managed care organizations. During the last two or three years, a "rapid response team" from AMA has worked in some 31 states in aiding physicians in such exigencies, and has enjoyed from time to time some measure of success.

During this time, however, there has been an outcry from several sectors in medicine for antitrust relief, especially from groups of employed physicians and from resident physicians. Toward that end, there are such organizations who have formed "collective bargaining units," meaning "unions." These are not the same as the labor unions, it is clear, since the "right to strike" is not part of any negotiating right for physicians. Unerringly clear is the premise that nowhere in any deliberations is there any thought of withholding medical care.

In this setting, the Board of Trustees of AMA was instructed at the last two meetings of the House of Delegates to structure a "Collective Bargaining Unit" (CBU). The board had spent untold hours wrestling with the issue and submitted to the House at this meeting a report which basically stated that the formation of a "CBU" was not a good idea, that a better route was to continue efforts at "private-sector advocacy" while continuing to support legislative reform. Many of you probably have heard of the "Campbell Bill" (HR 1304) which seeks to insulate physicians from some of the inequities which exist in the current anti-trust laws. This bill, which many believe has only a small chance of passage, has been vigorously supported by AMA lobbying activities.

There was prompt and intense response to the Board of Trustees' decision, many voicing their needs for AMA support in combating what they recognize as a critical lack in physicians' negotiating ability at a time when such ability is badly needed. The Board of Trustees report (BOT Report 30-A-99) was discussed at a special reference committee shortly after the House of Delegates convened, along with a large series of other resolutions referring to various aspects of collective bargaining and offering a series of ideas.

What came out of the reference committee, and was ultimately approved on the floor of the House of Delegates two days later, was a substitute resolution which instructed AMA to proceed with formation of the "collective bargaining unit." Much has been written and said about the decision since. I would like to summarize what I understand about the decision and the ramifications of it, especially as it applies to South Carolina and its physicians:

1. It is my feeling that the term "union" is anathema to the South Carolina public and to many of the physicians of South Carolina.
2. The process of "unionization" at this time, applies only to employed physicians and resident physicians. The AMA is certainly going to help them all that it can.
3. Self employed, "private practitioners" of medicine, which comprise some 65-70 percent of the 700,000 physicians of the country still have no "collective" ability to bargain (or "unionize".)
4. As things appear at this time in South Carolina, any effort at forming such "unions" seems unlikely. Efforts at such activity is, however, are clearly underway in several areas of the country, most notably in the northeast and the west.
5. The collective bargaining unit, as it is planned, bears little resemblance to the labor unions which exist. The bargaining strength of these organizations lies in their ability to "strike." No one has any idea of any physician, anywhere, any time, denying a patient services or care.
6. The forces which probably have the most influence in determining physician's potential for unionization, meaning the Federal Trade Commission and perhaps the Department of Justice, do not look favorably on any effort like this on the part of the AMA.

The coming years will tell how physicians will fare with the idea of "collective bargaining," and its impact on how we practice medicine. The SCMA Board of Trustees will be thoroughly reviewing this issue at their meeting on July 28 with a goal of developing a formal position/response for the association.

- A resolution which was sent to the SCMA House of Delegates from the SCMA Ethics Committee was well received by AMA. The resolution basically asks for the Council on Ethical and Judicial Affairs (CEJA), which has been asked by the AMA House of Delegates to revisit AMA's "Principle of Medical Ethics," to seek out the counsel of other disciplines such as social scientists, ethicists, philosophers, and the ministry in this effort. I have been assured by CEJA that this is being done, and South Carolina's resolution will be a strong influence on any decisions made regarding this honored document, which dates back to 1847.

- The work on the "Evaluation and Management Codes" of Medicare goes on. Working in every way it can with HCFA, revision of the cumbersome and complex codes is being attempted by the CPT Editorial panel of 15 physicians. To this point, HCFA has been trying to accept AMA's suggestions, but still clings doggedly to the premise that a "numerical counting system" will be utilized in determining how payment for office visits shall be made.

- The AMA, through its Council on Ethical and Judicial Affairs (CEJA), continues to wrestle with the issue of physician's selling various products in their offices. CEJA has previously rendered an opinion that states that selling "non-health related goods" is not ethical. I certainly hope that all South Carolina physicians agree with that opinion. The issue of physicians selling "health related" goods is more controversial, many felling physicians "know what is best" for their patients and feel they can best provide the "goods", be it vitamins, skin creams, food supplements, or even informational items such as books or video tapes, in a better fashion than the patient can otherwise secure or purchase them. CEJA has recommended a series of "guidelines" which anyone who wants to sell such health-related goods in their offices should follow: for example, the product should not be sold where benefit claims lack scientific validity; the product should be provided either free or at "cost"; the sale of the product should not be in "competition" with local pharmacies or other providers who can sell the same product at the same price, and that the physician should have the obligation to provide the patient with understandable literature addressing the validity of the health-related item when the patient asks for it. There was much testimony for and against the report, but the House of Delegates adopted it (CEJA Report 1-A-99).

- AMA policy which exists was reaffirmed regarding efforts to obtain repeal of a section of the Balanced Budget Act (BBA) of 1997 which granted the Secretary of HHS the authority to require a diagnosis code with each lab test claim. There is a report due out soon from a "Negotiated Rulemaking Committee" made up of many segments of the medical industry, including many physicians and physician-groups which will seek to change many of the current time-consuming and controversial rules regarding such HCFA regulations.

- The Wisconsin delegation submitted a resolution which pointed out that Medicare rules which currently exist have led to coverage of terminally ill patients under hospice being under-utilized. Physicians are said to be reluctant to "predict" that a patient will die within six months, which is the Medicare requirement, and there are a variety of reasons why. At present, this rule has resulted in only 20 percent of dying Medicare beneficiaries using hospice, the median length of stay in the hospice program being 29 days, nationwide. The resolution asks that Medicare change the prognostic time requirement to 12 months. The resolution was adopted.

- A year ago, AMA made an epochal decision regarding its endorsement of "employer-based health care insurance," recommending that it be replaced by "individual health care insurance." Three reports were generated reinforcing AMA's support for the reform. A resolution from California pointed out that a failure by employers to provide health insurance is the principle reason that there are more uninsured people in this country now than ever, even in this era of financial prosperity. There were also several resolutions which supported movement of Medicare benefits from its current plan to a plan in which Medicare beneficiaries could purchase their own health insurance.

- The issue of "hospitalists" engendered a report from the Council on Medical Education with regard to educational opportunities at the resident level. Also, other aspects of this new intervention in hospital care were addressed. In general, it continues to be AMA policy that use of "hospitalists" should be only with the consent of the patient and the referring physician.

At this meeting of the House of Delegates, between ninety and one hundred reports from the Board of Trustees and the seven Councils were submitted for study and action by the House. More than 300 resolutions were introduced, all requiring debate and action or referral by the House. I have obviously touched on only a few of these—the ones I feel are of interest and concern to you, the constituency of the South Carolina AMA Delegation. I refer you the *AMNews* and other publications for elements of other important issues, and there are many very important ones.

As I attempted to say in each of these reports to you in our *Journal*, we—the members of the delegation—function at your pleasure and at your beck and call. We take this responsibility very seriously and in my opinion, function effectively and well in your behalf in deciding how we will deal with these many issues. We recognize that some of the decisions are controversial and that everyone may not be satisfied. We welcome your comments and your input. We continue to feel that the American Medical Association is the strongest, most democratic organization in the medical world, and we desire to be the most responsive. If you are not a member, you should be. More than any other organization in the medical world, your AMA and its activities influence the way you practice medicine and provide for your patients. Participate!

Editorials

The following guest editorial was submitted by Dr. Mark A. O'Rourke, Chairman of the Community Advisory Board for Greenville Citizens for Life. Guest editorials reflect the opinions of the authors and do not necessarily reflect the opinions of the officers and trustees of the South Carolina Medical Association.

—CSB

ASSISTED SUICIDE, A YEAR LATER, STILL A MISTAKE

A controversial form of suicide has been legal and openly practiced in Oregon for over a year. A state law, called the Death with Dignity Act, went into effect in 1998. It allows a resident to end his or her life by swallowing a fatal overdose of pills prescribed by a doctor for that purpose. Fifteen suicides committed in this manner were reported to state authorities in 1998. Oregon's experience with assisted suicide was reported in the February 18, 1999 issue of the *New England Journal of Medicine*. The Special Report gives us important data to explain why these people chose assisted suicide and it demonstrates why assisted suicide is still a mistaken policy.

The most striking findings in the *New England Journal* Special Report are the reasons given to explain the choice of suicide. Pain was not the main issue. Pain was hardly an issue at all! In only one of the fifteen cases was a concern expressed about pain at the end of life. In the other fourteen cases, no such concern about pain was expressed. The concern that did stand out in this group was a desire for control over one's destiny and autonomy. Twelve of the fifteen were concerned about a loss of autonomy, and eight were concerned about loss of control of bodily functions. The majority of the group was not completely disabled at the time they took their lethal medications. The authors of the report concluded that the decision to choose suicide was influenced by a desire to control the time and manner of death, and not with fear of intractable pain or financial loss.

Oregon made assisted suicide legal because proponents painted a picture of unrelieved pain and suffering that could only be alleviated by suicide. In Oregon in 1998, there were 28,900 deaths from all causes and 6,784 deaths from cancer. Oregon is a national leader in the use of hospice care and strong painkillers for terminal patients. The important lesson in this report is that the very few to commit suicide under this law did so for reasons other than pain. Hardly anyone chose suicide because of intractable pain.

Why should it matter to everyone else in Oregon and in the United States if fifteen people (thirteen with cancer) chose assisted suicide in Oregon in 1998? There are two reasons. First, people contemplating suicide need attention to their psychological and spiritual well-being. Only four of these fifteen Oregon suicide patients received psychiatric or psychological consultation after discussing suicide with their physicians. When people as sick and fearful as this group get so little attention to their mental health needs, the rest of us need to take notice. A request for suicide should not be taken at face value as a request for an end to one's life. Instead, the real meaning of a suicide request is a plea for care, attention and support. Legal suicide is a temptation for medical professionals and others to pay less attention to the care of people with difficult chronic and terminal illnesses and to use suicide as the easy way out.

Second, legal suicide creates situations where persons with certain illnesses or diagnoses will be pressured to choose suicide. An insurance company might offer to pay earlier bills in exchange for a person choosing suicide, so that the insurance plan can stop paying for any care. A hospital receiving fixed reimbursement from Medicare, Medicaid, or an HMO might lower the bill for a person willing to choose suicide, so that the hospital can make more money. A doctor, under pressure from a hospital or managed care organization for patients under his care to have lower healthcare costs, would be tempted to recommend suicide to a patient with a terminal illness, instead of hospice care and pain control. A relative in a hurry to receive an inheritance might suggest to a person with chronic illness that early suicide is more dignified than living out one's natural days with the best medical care available. Last, the person with the illness, trying to decide what to do and getting pressure to choose suicide, might think that it is his duty to choose suicide.

Legal suicide diminishes the value each of our lives. As time goes on, it will distract the medical profession from providing good care at the end of life and people will be coerced into choosing suicide. The experience in Oregon demonstrates that legal suicide is not needed to control pain and suffering. Legal suicide and euthanasia are not ideas whose time has come. They are ideas whose time should never come.

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THE COWARD'S AMYGDALA

The best doctors, like the best scientists, seldom claim complete understanding. There is always another "Why?" Also, they refuse to let their thought processes be boxed in by the various coding systems. The more thoughtful the clinician, I suggest, the more often will diagnoses read "cause undetermined." It might help to keep a running list of unresolved problems, for there are times when the answers are made clear only by medical progress. Three such cases come to mind from my first years in practice nearly a quarter century ago.

An elderly woman with chronic lung disease was comatose, near death, for no apparent reason. I stopped everything and gave her intravenous fluids, vitamins, and steroids. She woke up. The likely diagnosis surfaced years later when theophylline blood levels became readily available and the syndrome of theophylline toxicity in the elderly gained publicity. Less fortunate was a young woman who, following a routine cone biopsy of the cervix, developed the acute respiratory distress syndrome with multiorgan failure. She almost surely died from a then-undescribed condition: staphylococcal toxic shock syndrome.

The third patient was known in our practice as "the coward." Every several months he'd show up in the emergency room, brought there by ambulance and convinced he was having a heart attack. The studies were always normal. For whatever reason, I chose to take him seriously and befriended him as a fellow human in need of reassurance. The heart attack never came, and I kept in touch with him through his place of work for many years. Indeed, he was delightful and I was genuinely sorry when he retired and I lost touch with him. Much later, I realized the likely diagnosis: panic disorder.

I this issue, Dr. Dean Schuyler of Charleston discusses panic disorder in the setting of a case report. Prompted by this manuscript, I carried out a MEDLINE search with these results: no articles on panic disorder prior to 1985; eight articles between 1985 and 1990; and 2,072 articles between 1991 and 1999. To be sure, what is now called "panic disorder" was formerly known as "acute anxiety attack." However, the burgeoning literature supports three points: (1) panic disorder is a distinctive syndrome that can be diagnosed on clinical grounds; (2) this disorder is relatively common, affecting up to three percent of the population; and (3) untold millions of dollars are spent every year in typically-fruitless searches for "organic" disease in these patients.

According to the DMS-IV criteria (summarized by Dr. Schuyler), the symptoms of panic disorder develop abruptly—usually with little or no warning—and peak within ten minutes. Fear of heart attack is the best-publicized presentation; studies suggest that 30 percent to 50 percent of patients with recurrent chest pain and normal coronary arteries meet the criteria for panic disorder.[1] Patients with known panic disorder should not, however, be dismissed when they develop chest pain since pain can indeed be linked to cardiovascular mortality.[2]

There are at least several additional subtypes of panic disorder, and the list is growing. Some patients have primarily vestibular effects, others depersonalization, and still others gastrointestinal symptoms. Patients suffering from both asthma and panic disorder pose a special diagnostic problem, but identification and treatment of panic disorder in asthmatic patients improves the quality of life.[3-4] Panic attacks and panic disorders are relatively common in children and adolescents,[5] and are almost surely underdiagnosed in the elderly.[6] Panic disorder is associated not only with anxiety but also, and perhaps more significantly, with depression. One study indicates that 21.6 percent of depressed patients have a panic attack at some point in their lives, and conversely, that 55.6 percent of patients with lifetime panic disorder give a history of major depression.[7] Fortunately, treatment usually helps.

Cognitive-behavioral therapies are effective in up to 80 percent of patients.[8] At present, selective serotonin reuptake inhibitors (SSRIs) seem to be the most frequently-used drugs for panic disorder. The agents are better-tolerated than the tricyclic antidepressants and lack the dependence problems associated with the benzodiazepines. They have the additional advantage of treating concurrent depression.[9] Long-term therapy seems to be necessary, yet safe and effective. The course waxes and wanes, with the prognosis being worse in patients who also have a personality disorder, agoraphobia, or depression.[10] I gained the impression from the literature that huge strides are being made in long-term management.

I would like to think that "the coward" in our practice was entirely normal except for his amygdala. One view is that panic disorder is caused by a misguided "false threat alarm" arising from neurobiological dysfunction in the amygdala and ascending transmitter systems.[11] Data suggest that the amygdala and the periaqueductal gray matter represent, respectively, the rostral and caudal poles of a neural network responsible for integrating the response to both innate and learned threats.[12] Studies using positron emission tomography (PET) confirm the suspicion that subcortical structures contribute to both normal and pathological forms of anxiety.[13] The exact basis is not known. An alphabetized list of agents that cause panic symptoms in healthy volunteers includes caffeine, carbon dioxide, cholecystokinin, serotoninergic agents, sodium lactate, and yohimbine.[14] Researchers in this area, I concluded, are having a field day.

In closing, I should add that my MEDLINE search made it clear that there is considerable expertise on panic disorder at the Medial University of South Carolina (MUSC). Dr. James C. Ballenger, chair of MUSC's Department of Psychiatry, also chairs an International Consensus Group on Depression and Anxiety.[15] Other members of the MUSC department have studied its biological basis, relationship to depression and the effects of various drugs.[16-19] Someday, perhaps, one of these faculty members will tell us exactly what was wrong with "the coward." Meanwhile, I'm just glad that I took him seriously.

—CSB

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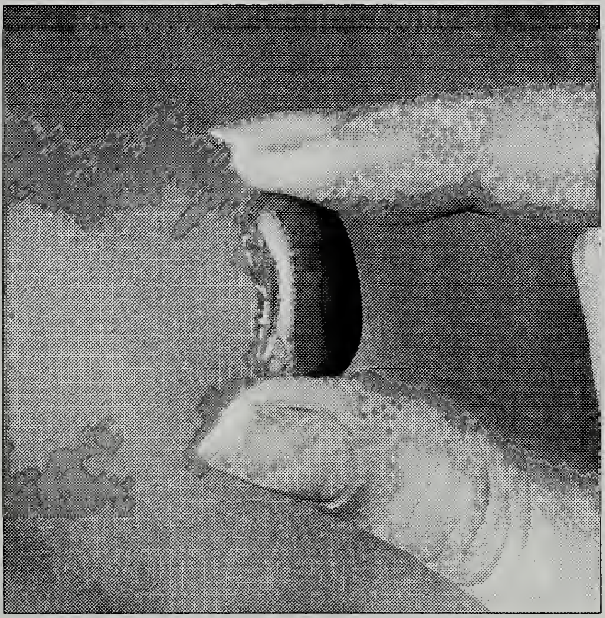

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This space is contributed by the publisher.

On the Cover:

ROBERT BLAKELY DURHAM, M. D. (1892-1957)

Born in Orangeburg County in what is known as Ethridge's Mill on the 12th of February 1892, Robert Blakely Durham, SCMA President 50 years ago, was educated in Orangeburg and Columbia before attending the South Carolina Co-Educational Institute at Edgefield. He went on to the University of Georgia School of Medicine and graduated in 1913. Dr. Durham's grandfather, father and a brother were also physicians. Before settling in Columbia early in 1915, Dr. Durham practiced briefly in Perry, South Carolina.

In 1917, he volunteered for the army and was called to service in August. On September 6, 1917, he sailed for France. Dr. Durham served 23 months at the front, first as a Battalion Surgeon and later as commander of an ambulance corps. At the end of the war, he remained in France to attend a four-month, special course in surgery at the University of Bordeaux. When he returned to the United States, he was discharged from the army as a Captain.

Dr. Durham married Elizabeth Spratt of Fort Mill in 1921 after returning to Columbia to resume his medical practice. He served as Medical Director of the United States Veteran's Bureau in Columbia from the time of its organization (c. 1921) until the completion of the Veteran's Hospital in 1932. Pursuing his interest in surgery, Dr. Durham served as Dr. Julius H. Taylor's[1] assistant for seven or eight years.

Dr. Robert B. Durham, the President of the South Carolina Medical Association in 1949, was active in organized medicine through most of his career, serving in several capacities, including delegate from his home society to the State Medical Association and Chairman of the Board of Censors of the Columbia Medical Society as well as President of the Columbia Medical Society in 1938. In his SCMA presidential address in May of 1949, Dr. Durham voiced concerns about the shortage of general practice physicians, especially in rural areas of the state; the system of training for medical specialties; socialized medicine; and the view of physicians in their communities.[2]

Dr. Durham and his wife made their home in Columbia until 1933 when they built their first "Sleepy Hollow" off Platt Springs Road. This property was taken over by the Army Air Corps for an Officers' Club during World War II. They lived at the Columbia Hotel until they built their second "Sleepy Hollow" on a 60 acre tract where he died October 1957.

Dr. Durham was quoted in an interview a year after his retirement in 1955, ". . . I love to work. . . always have. You've got to work in this world. Nothing comes to those who sit down and wait."[3]

Jane McCutchen Brown, Curator
Waring Historical Library

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Letters to the Editor

Dear Sir:

As a native South Carolinian and a practicing orthopedic surgeon in a rural part of South Carolina, I was extremely disappointed and angered at the March 1999 *Journal of the South Carolina Medical Association.*

Physicians such as myself have dedicated our lives to taking care of all people in rural areas. We take care of the poor and the African American. In our community, people are treated equally. We are people of action and not of words.

If the intent of your journal is to create good will and dialogue between physicians, you are headed in the opposite direction.

If this is the best that your journal can do, please cancel my subscription.

Name withheld

In response:

The symposium issue was sponsored by the SCMA's Ethics Committee. I do not think that the authors meant to imply that disparities in health status are largely due to racial discrimination. As pointed out in my editorial, I, too, would protest any such insinuation. All of us should strive to treat everyone alike, and you are certainly to be commended for maintaining this standard in your own practice.

—CSB

Dear Sir:

As a liver transplant recipient (November 1991) and Chairman of the SCMA Task Force on Organ & Tissue Donation Education, I would like to provide some additional comments to Dr. Robert M. Sade's article: "Transplantation, The Organ Gap, and Race."

The field of transplant medicine is relatively new. Although the first corneal transplant was performed in 1905 and the first kidney transplant in 1954, it was not until the mid 1980s with the introduction of new immunosuppressant medication combinations did transplantation start to grown and become an accepted treatment for a variety of end stage organ diseases. Prior to this time, it was considered largely experimental. Patient and graft survival rates were low, not approaching the 97 percent rate for living related kidney transplants just 15 years later. With better immunosuppressants, increased knowledge and improved surgical techniques, the field of transplant medicine has grown. There are now 272 transplant centers in the United States performing more than 20,000 solid organ transplants a year.

In 1988, the United Network for Organ Sharing (UNOS-a private nonprofit corporation under contract to the federal government to maintain the national waiting list) listed 10,964 patients awaiting a vital organ transplant. Today, 65,733 are waiting including 635 South Carolinians!

Although both the field of transplantation and the national waiting list have grown, the acceptance of the need for organ and tissue donation by the general public has not resulted in a significant increase in organ donors over the last five years. This has resulted in an extreme shortage of available organs and tissues for transplantation. It is also interesting that in transplant recipient families who have experienced life saving organ transplantation, only 28 percent of recipient family members have signed organ and tissue donor cards as compared to the general population of 22 percent who have voluntarily done so.

Have all educational efforts failed to improve donation? This is difficult to answer in specific terms or statistics but statistics do exist that where there is a concerted effort made at public education, there has been an increase in donation.

Two programs have definitely improved organ donation. First, the state of Illinois' ***Life Goes On*** program initiated in 1992, has raised $2 million per year for public educational programs promoting organ and tissue donation. The Regional Organ Bank of Illinois (ROBI) has had a 30 percent increase in organ and tissue donation since 1992. Many factors have led to this increase but the educational program has certainly had a major impact. Prior to 1992, 22 percent of the state residents were registered as organ and tissue donors—presently 43 percent participate.

The state of Kentucky's ***Trust For Life*** program initiated in 1993, has raised $300,000 annually for similar educational programs. The Kentucky Organ Donor Affiliates attribute an increase of 53 percent in organ donation in their service area to the educational program. Forty eight percent of the state's population contributes to this initiative.

In our state, the South Carolina Lions Clubs have been promoting eye or corneal donation education for more than 20 years. Through their educational efforts, we meet the need for corneal donations and this year, we will most likely surpass the state's need and will be able to supply others in the United States and abroad with the gift of sight!

Educational efforts take five to 15 years to influence the public as well as the medical community. Sadly, organ and tissue donation education is incorporated in only one third of our medical schools. Is it discussed in either of our two medical schools? How do we expect the general public to accept donation when many in the medical profession know little about the donation process and are unable to answer questions to the many misconceptions pertaining to it!

Have state laws influenced the donation rate? ***Pennsylvania's Act 102*** signed into law in 1995, which requires all hospital deaths to be reported to the local organ procurement organization (OPO), has resulted in a 40 percent increase in available organs. There has been an increase of 20 percent of donated musculoskeletal tissue and corneal donations exceed the present demand in the OPO's service area. This law has been so successful in increasing donation that the Department of Health and Human Services (HHS) has issued regulations to all participating Medicare and Medicaid hospitals that are very similar to Pennsylvania Act 102. These regulations were federally mandated effective August 1998. HSS is hoping that this will increase available organs and tissues by 20 percent.

The African American community does indeed suffer from end stage renal failure at a higher rate than Caucasians. In South Carolina, 73 percent of those registered for a kidney transplant are African Americans! (UNOS statistics 22 March 1999.)

Will directed donation by the African American community solve this problem? Directed donation—a donor family or the donor prior to death specifies the characteristics of the recipient in terms of "local or national" distribution, younger or older age, membership in certain organizations or churches and the like" (original article). Race, religion, gender or financial status could come under "...and the like." Directed donation can be a double-edged sword. The Ethics Committee of UNOS in November 1994 stated, "donation of organs in a manner which discriminates for or against a class of people is unethical and may not ethically be accepted by UNOS members or transplant professionals. Directed donation to classes of individuals based on race, national origin, religion, gender, or similar characteristics undermines society's confidence in the practice of transplantation." If donated organs do not match the specific requirements of the donor family or the donor, the organs that could be used to prolong the life of another individual would be lost. What a waste! We cannot afford to lose such valuable resources with the demand being so great. If we lived in a perfect world, directed donation could be considered. However, we do not. We have to deal with human biases and prejudices. Directed donation can be viewed as a violation or contradiction to civil rights. Directed donation itself can be a form of discrimination. Approximately 60 percent of kidneys transplanted into African Americans are from Caucasians. Prejudice by directed donation conceivably could lead to fewer African Americans receiving kidney transplants!

Financial incentives remain a viable option to increase donation of organs. Such payments however are presently against the National Organ Transplant Act of 1984 and before any pilot project is proposed, federal law would have to be rescinded. ***"Financial Incentives for Organ Donation,"*** prepared by the UNOS Ethics Committee, available on the internet site www.unos.org, was circulated for ***informational purposes and to stimulate discussion of a very important subject.*** The Board of Directors did not adopt it as policy. In concluding the committee states, "until supportive data become available....the feasibility and effect of financial incentives for organ donation remain questionable. Ultimately, only if and when financial incentives for organ donation are widely accepted as different from the purchase of organs, can this alternative be proposed as preferable to the current system of altruistic organ donation." The various proposed financial incentives for increasing donation will continue until federal law is changed or it is tested in federal court.

Since I have become involved in promoting organ and tissue donation, one factor has always come to the forefront. How many brain dead individuals are actually available for possible organ donation? Figures have ranged from a high of 25,000 to a low of 10,000 per year. Using either figure, our present donation rate ranges from 20 percent to 50 percent of available donors. We may be able to improve on these by 20 percent as the federal government hopes. But will we ever be able to obtain sufficient organs for transplantation?

We must continue to look at other means of providing organs for transplantation. Research must continue in xenotransplantation and the productions of organs from embryonic cells. It is only by these additional sources will we be able to meet the ever growing demand for organs.

Lawrence F. McManus, MD
Chairman, SCMA Task Force on Organ & Tissue Donation Education
1463 Circle H Woods
Prosperity, SC 29127

The above letter was forwarded on to Dr. Robert Sade and the following is his response:

Dear Sir:

No one understands the need for organs and tissues nor appreciates the supreme value of donation more than Dr. McManus, a liver transplant recipient and director of the Gift of Life Trust Fund. From his comments, it is apparent that he and I are singing the same song, though perhaps we are on different pages. I agree with nearly everything he has said, but wish to emphasize some key points.

There is no question that educational efforts can improve donation rates. They have led nationally to an increase in donation rates of about five percent a year over the last ten years. Despite vigorous educational efforts, however, the supply of organs falls far short of the need. This year, nearly 5,000 people will die waiting for an organ that never came. Only about a third of medically suitable organs are donated; the rest are buried. There is also no doubt, as Dr. McManus points out, that state laws can influence donation rates, but again, such laws have failed to increase donation rates enough to keep pace with the need for organs.

Dr. McManus correctly quotes the Ethics Committee of UNOS as having said "donation of organs in manner which discriminates for or against a class of people is unethical . . ." My contention is that this statement is off the mark and is based on a narrow understanding of ethics and social justice. As a society, we do not find it unethical nor have we made it illegal for people to bequeath their worldly goods to specified individuals or to institutions. No sustainable arguments have ever been made to show that organs should be treated differently from other valuable gifts. Moreover, there is no evidence to answer the question of whether or not directed donation will increase donation rates in general, particularly those of minorities. There never can be such evidence until we are willing to make the effort to study the question by activating such a policy as a pilot program.

Dr. McManus is also quite correct in quoting the UNOS board of directors: "until supportive data become available . . . the feasibility and effect of financial incentives for organ donations remain questionable." Of course this is true, but how can supportive data become available unless we are willing to do the needed investigations? There is, on the other hand, a good deal of indirect evidence that financial incentives for organ donation could supply all the organs needed for all patients currently on waiting lists. The transplant and bioethics communities have remained unwilling even to do a pilot study to develop data on this question.

Xenotransplantation and in-vitro growth of organs are exciting possibilities for decreasing the mortality rate from end organ failure, but remain far in the future. Our friends and neighbors are dying today because of lack or organs. We, as a caring society, owe it to ourselves, our families, friends, and fellow citizens to investigate all possible avenues for increasing the available number of organs. We should not be diverted by statements from ethics committees or other "experts", however impressive their credentials, when they fail to provide good reasons for labeling reasonable programs "unethical."

Educational programs to motivate people to donate for the public good are undoubtedly the most important route to increasing availability of organs for transplantation. Dr. McManus has done more than any one person to advance such educational goals in South Carolina. Perhaps he would agree, though, that other motivations for donation are also acceptable and should be investigated, particularly when so many lives hang in the balance.

Robert M. Sade, MD
Professor of Surgery, MUSC
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Alliance Page

"PREGNANT PAUSE" HEALTH PROJECT

PREGNANT PAUSE
to end fetal alcohol syndrome

"Pregnant Pause" is a project designed to educate people about Fetal Alcohol Syndrome. "Pregnant Pause" was developed and first initiated by Florence County Coalition for Alcohol and other Drug Abuse Prevention. South Carolina Medical Association Alliance has embraced this important issue, and has vowed to promote awareness statewide.

Specifically targeted groups are:

1. Women who are, or may become pregnant.
2. Alcohol beverage servers and those who prepare drinks.
3. Men whose partners are, or may become pregnant.
4. Managers of establishments that serve alcohol to the public.

The project centerpiece is a nonalcoholic drink recipe competition. Area establishments that serve alcohol are invited to submit nonalcoholic drink recipes and prepare them for pregnant participants. Prizes for the tastiest drinks are awarded, physician speakers address Fetal Alcohol Syndrome problems, and alcohol beverage servers are alerted to the importance of an alcohol-free pregnancy.

Brochures have been developed and are available for distribution. Following are a few examples from the brochure:

1. FAS characteristics include abnormal facial features; a thin upper lip and flattened cheek bones, while the groove between the nose and upper lip is flattened or absent, and slow growth (both before and after birth.)
2. FAS can cause attention deficit and hyperactivity disorder, learning disabilities, and problems with daily living skills.
3. No amount of alcohol has been proven safe to consume at any time during pregnancy.
4. The good news is...**Fetal Alcohol Syndrome is 100% preventable.** Simply abstain from alcohol use during your pregnancy. Remember, a drink anytime during your pregnancy could lead to a lifetime of hurt for your child. If you're pregnant, take a break from drinking. You'll be giving your baby a break, too.

County alliances are being encouraged to stage an awareness event. Programs can be tailored to the size and resources of the counties. Our goal is to publish and distribute a "Pregnant Pause" booklet in honor of Doctors' Day, 2000. This handy booklet will contain nonalcohol drink recipes and basic facts about Fetal Alcohol Syndrome. County alliances will be asked to hand out these booklets to local restaurants and lounges. Alliances will urge these establishments to feature the nonalcoholic drinks on their menus (Valentine's Day, Mother's Day, monthly specials, etc.) Please support us as we take on this important health issue.

Shirley Meiere
SCMAA President, 1999-2000

Classifieds

ALLERGY & IMMUNOLOGY, CHILD AND ADOLESCENT PSYCHIATRY, DERMATOLOGY, FAMILY PRACTICE, GENERAL SURGERY, ONCOLOGY, OTOLARYNGOLOGY: Practice opportunities exist in local medical facilities and with private practice groups in Orangeburg County for experienced practitioners and graduating residents/fellows. All positions include salary or minimum net income guarantee and a relocation allowance. Located at the junction of I-26 and I-95, 35 minutes to Columbia and 70 minutes to Charleston. Area known for its gardens, golf, hunting and fishing (Lake Marion). Achieve financial success in a non-competitive environment while enjoying a superior quality of life. *Contact Dr. Chermol, The Regional Medical Center at (800) 866-6045.*

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

HAVE YOU UPDATED YOUR TERM LIFE INSURANCE?

Premiums Today Are Much Lower Than Even 2 Years Ago

There have been substantial decreases in premiums for term life insurance recently. Premiums today may be lower than they were just one or two years ago. If you have term insurance, you should take advantage of these lower premiums. Due to new legislation, these premiums may not be available much longer.

New term insurance legislation (Regulation XXX) will be effective January 1, 2000. This legislation will negatively affect the price of term insurance purchased after its effective date. Regulation XXX has been pending for a number of years and was first planned to be effective on January 1, 1996.

When that effective date didn't happen, the assumed effective date was rolled forward; first to 1997, then to 1998, 1999 and finally 2000. Recent adoptions make the year 2000 effective date concrete. As the effective date rolled forward, companies fought for market share by continuously reducing premiums. The decrease in premiums really accelerated in 1998 and 1999.

The companies also began offering term policies with level premiums lasting many years. Policies with level premiums for 10, 15, 20, 25, and even 30 years are now available. Premiums have decreased so much that premiums for 20-year term today are about what they were for 10-year term only a few years ago.

Companies also developed more underwriting classes. At the beginning of the decade, insureds were classified either as "smokers" or "non-smokers". Most companies today offer at least "standard" and "preferred" risk classes while some also offer a "preferred-plus" class.

The insured must be healthy to qualify for any of these classes. The requirements are more stringent to qualify for preferred rather than standard and even more so to qualify for preferred-plus. Estimates are that approximately 50% of healthy applicants will qualify as standard, 35% as preferred, and 15% as preferred-plus.

The following premiums serve as guidelines for the various risk classes. They are examples only and do not represent any one company's products. Premiums are for $1,000,000 of 20-Year Term for an insured who has not used tobacco for at least 3 years:

UNDERWRITING CLASS	Age 40	Age 50	Age 60
Standard	$1,600	$3,300	$8,200
Preferred	$1,100	$2,600	$6,300
Preferred Plus	$900	$2,200	$5,400

These premiums clearly demonstrate the importance of being in the best risk class for which you qualify. Underwriting decisions vary, so an applicant who is a standard risk with one company may very well qualify as a preferred risk with another.

The advice of a knowledgeable agent who is familiar with the underwriting practices of various companies is vital to help you through this maze. Be aware that the company with the lowest premium does not necessarily offer the best value. There are many factors other than price that you should consider.

Regulation XXX will have a negative impact on the pricing and features of term policies purchased after its effective date. These higher premiums and/or shorter guarantees make today the best time to re-evaluate your term life insurance needs. Your window of opportunity may be very short.

Views expressed herein are those of the authors and in no way represent SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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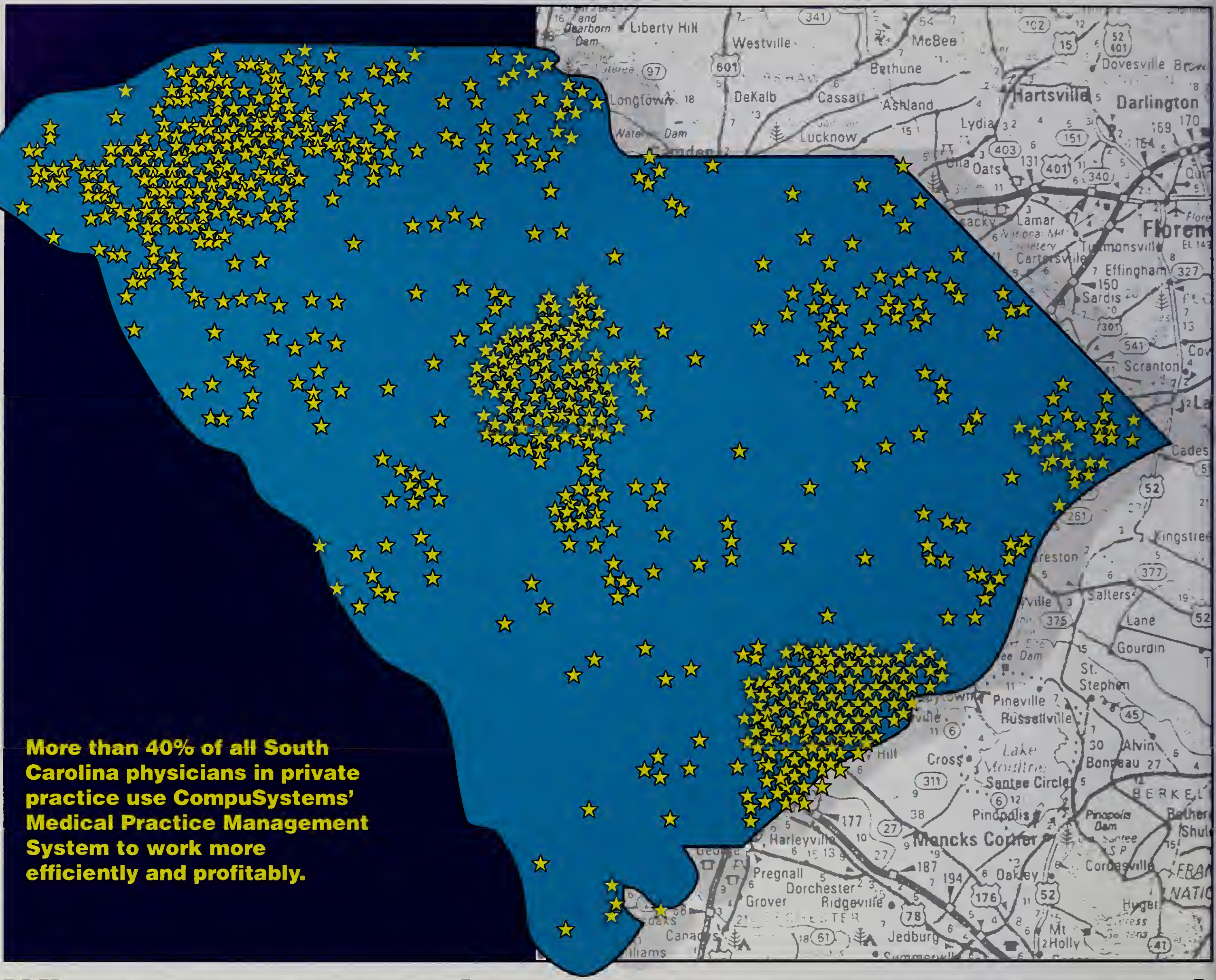

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For example, it might show how a 16-year commitment to "Working for Physicians" has resulted in over 660 installations in South Carolina, representing some 1,930 physicians — over 40% of the 4,600 in private practice in the state!

It might bring home how features like "on-the-fly" refiling, encounter-form tracking, and direct transmission to South Carolina Medicare, Medicaid, and Blue Cross/Blue Shield (with no per-claim charges) are improving physicians' revenue.

It could clarify how critical "one-call" support can be in helping offices stay productive — how telephone support staff, software and hardware engineers, technicians, trainers, and a fleet of service vans can provide support unmatched in the industry.

It might demonstrate how technical expertise brings a host of innovations, starting with the first integrated, direct electronic claims capability in a practice management system.

Or it could validate the concept of regional focus: By selling systems only in the Southeast, a computer company can keep customers up to date on the latest insurance filing requirements.

It could emphasize the flexibility of multi-user, multi-tasking software that runs on the most popular operating system in the world.

And it could illustrate the value of having a computer vendor with a vision for the future and the expertise to make that vision work for you.

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The Journal

OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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BEHÇET'S DISEASE AND PHEOCHROMOCYTOMA
HUMAN MONOCYTIC EHRLICHIOSIS
INFECTION WITH CHLAMYDIA PNEUMONIAE AND ATHEROSCLEROSIS

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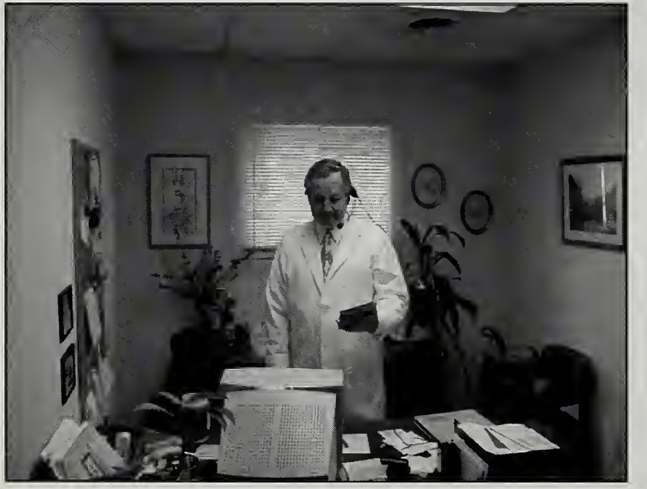
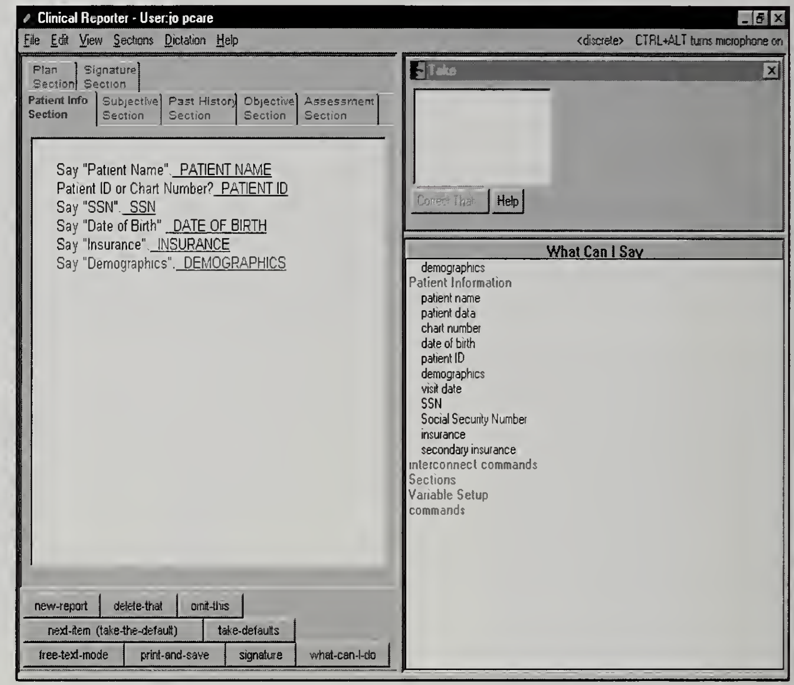


Whether it be their smiling faces or pictures and images that provide an all encompassing assessment of their medical records and history, Fox Meadows 'P/CMS' makes it all accessible at the touch of a button.



Say "Patient Name". PATIENT NAME
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Say "SSN". SSN
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Say "Insurance". INSURANCE
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  patient data
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Announces Annual Meeting

October 9, 1999

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President's Page

IS IT GOOD FOR MEDICINE?

The AMA, at its Annual Meeting in Chicago on June 20-24, made some significant decisions that may affect each of us in the next few years. Of course I am talking about the decision to develop an affiliated national labor organization to represent employed physicians and where allowed, residents. Collective bargaining is what this is all about. It will apply to physicians who are employed by managed care organizations, insurance companies, hospitals and a few other entities.

Specifically, this decision will allow physicians who are authorized under state law to collectively bargain. This action is in response to the frustration that many physicians are feeling about the current system of managed care. While the South Carolina delegation did not vote in the affirmative, the South Carolina Medical Association will have to consider the decision and decide how it will respond.

A few days prior to the AMA Meeting, Governor George Bush of Texas signed into state law a bill that would allow this to occur in Texas. A passionate plea was made by the Texas delegation to follow this route in order to achieve on a state-by-state basis what had been accomplished in their state. This approach was preferable to the South Carolina delegation, but the majority of the House of Delegates felt differently.

Were there any real winners in this decision? I suppose we could make a good case for those physicians who are so prohibited from making decisions by the bureaucratic contracts under which they work that patient care is jeopardized. I suppose we could make a good case for those house staff physicians who work in hospitals with high service load, little education and poor pay. I'm sure there are others that we will identify in the weeks and months to come that will be winners in all of this.

Labor organizations are traditionally thought of as those who go on strike when discussions become nonproductive. The AMA stands firmly behind the premise that physicians will not strike! We must reassure our patients that physicians will not leave them without care.

Another highlight of the meeting was the introduction of "Is it good for medicine?," a major initiative on health care from the AMA. You will be hearing more about this in the months to come. But I ask *you* now—is it good for medicine? With this issue, time will tell.

In conclusion, one additional highlight that is truly good for medicine—our own Dr. Randy Smoak of Orangeburg was elected president-elect. He will be the first South Carolinian selected to the office of president and will be installed at the Annual Meeting in 2000. We are all very proud of Randy and know that he will serve us well!

William H. Hester, MD

William H. Hester, M. D.
President

The Journal™ OF THE SOUTH CAROLINA MEDICAL ASSOCIATION
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SCMA NEWSLETTER

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August 1999

MEDICAID UPDATE

Removal of Administrative Fee From Injectable Drugs
Effective with dates of service on or after June 1, 1999, the Department of Health and Human Services (DHHS) removed the $2.00 administration fee from all injectable drug codes, which previously had this built-in reimbursement. Providers should bill the appropriate drug code(s) in addition to 90782 for the administration of each injection. Code 90782 includes the syringe, needle, and administration of the drug. If you have questions, please contact Ms. Penny Faulkenberry, R.N., at (803) 898-2665.

Hyperbaric Oxygen Therapy
DHHS has adopted the new coverage criteria published by Medicare for the Hyperbaric Oxygen Therapy (HBO). The policy has been revised to clarify covered conditions, to clarify physicians supervision requirements for constant attendance in all sites of service, and to establish credentialing requirements that must be met to qualify for payment.

Allergen Immunotherapy
Effective June 1, 1999, Medicaid changed from its traditional billing procedures for Allergen Immunotherapy services. As on June 1, Medicaid reimbursement for these services is based on the description by CPT. It will be important to follow the individual CPT description of each procedure code, relating to these services, to determine whether billing by dose or vial. Contact your Medicaid program manager at (803) 898-2660 if you have specific questions.

Year 2000 (Y2K) Preparations
DHHS will be Y2K compliant and able to continue processing claims at the end of the year. Their system will be adapted to comply with the new year. It is important that you continue billing as usual and not make changes when billing for Medicaid reimbursement.

HIGHLIGHTS OF THE JULY 28, 1999, SCMA BOARD OF TRUSTEES MEETING

Jerry R. Powell, M.D., Appointed Secretary of SCMA Board of Trustees
At the September 28 board meeting, Jerry R. Powell, MD, was elected by acclamation to fill the unexpired seat of Richard E. Ulmer, MD, who resigned in May. Dr. Powell is a surgeon practicing in Anderson.

SCMA Board Looks at Collective Bargaining Issue
The SCMA's preliminary statement from June 23 was reaffirmed with minor editorial changes. In addition, the board voted to continue to study the issue, research the number of employed physicians in South Carolina and obtain information from the AMA as needed. Studying this issue will first involve finding out how many physicians in the state it would actually affect. For copies of the statement, please contact Dana Kickey at (800) 327-1021, extension 234.

PAAC Appoints New Member
Ken Johnson, MD, from Manning, has been appointed to the Physicians Advocacy and Assistance Committee.

Record Year for SCMA Financial Services, Inc., and Physicians Care Network
SCMA Financial Services, Inc. and Physicians Care Network both had a record earning year this fiscal year. SCMA FSI generated over 1 million in commissions and plans to branch out to offer other insurance products to their physicians and other clients. Physicians Care Network also had a record year as it experienced tremendous growth and expansion.

YOU CAN HELP SAVE LIVES THROUGH ORGAN AND TISSUE DONATION IN SOUTH CAROLINA

Gift of Life Trust Fund of South Carolina

Did you know that statistically, five percent of the 5,475 members of the SCMA will require a vital organ or tissue transplant within the next ten years in order to prolong and improve the quality of life? Two hundred and seventy-three members of the SCMA will require an organ or tissue transplant in the next ten years! You could very well be one of those 273! According to today's donation rates, 50 percent of the 273 will die while waiting.

Did you know that a South Carolinian dies every five days because an organ is not available because of end stage organ failure? Did you know that in 1998, there were more than 32,000 deaths in South Carolina but only 71 organ donors, 184 tissue donors and 426 eye donors? Did you know that presently there are 671 South Carolinians on the UNOS national list waiting for a vital organ transplant?

There is a growing need and interest to increase physicians' awareness of the need to improve organ and tissue donation. In December of 1998, the American Medical Association launched its national organ donation awareness program, "Live and Then Give." The implementation of this program sends a clear signal that the AMA takes seriously the urgent need to address the shortage of organs available for transplantation.

The SCMA has been active in this education process by forming a task force on Organ and Tissue Donation Education. In a cooperative effort with the Gift of Life Trust Fund of SC (GLTF), an educational program has been developed to inform the public about the need for and acceptance of organ and tissue donation. The GLTF has an Internet site at www.giftoflife-sc.org which includes a "Question and Answer" page and a questionnaire. The page provides the answers to the most commonly asked questions concerning organ and tissue donation and also provides answers to the new federal regulations which involve your reporting of all in-hospital deaths to the South Carolina Donor Referral Network.

In addition, the GLTF has developed a brochure regarding organ and tissue donation. In a cooperative project between SCMA and the GLTF, this information should be displayed in every physician's waiting room in our state. An acrylic display holder and informational brochures are available at no cost to physicians. How can you help? Call the Gift of Life Trust Fund at 1-87-PASS IT ON (toll-free 1-877-277-4866) to request information concerning this

(see Gift of Life, page 4)

SCMA WORKSHOPS

CODING AND DOCUMENTATION: PUTTING IT ALL TOGETHER

September 16, 1999

This full day seminar will address many of the most common coding concerns for all medical practices. Looking at areas that are commonly missed or misunderstood, attendees will be given practical solutions for ensuring correct reimbursement while meeting government and commercial carrier requirements. **Register by September 6, 1999.**

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

CHART AUDITING

September 30, 1999

This full day seminar will address chart auditing as a mechanism for compliance and improved reimbursement within your practice. The attendees will receive useful information that will aid them in performing chart audits for their practice. **Register by September 20, 1999.**

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, SC Medical Association Headquarters

Space in each workshop is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, ext. 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

PHYSICIANS CARE NETWORK UPDATE

Currently, there are 8,204 participating physician locations, 898 participating ancillary locations and 96 participating hospitals. PCN has 123 contracted groups with 63,952 covered lives. We will continue to provide information as contracts are received.

NEW GROUPS:

- Grove Medical, Inc; Piedmont; effective 7/1/99
- Carolina Laser Technology; Gaffney; effective 7/15/99
- City of Liberty; Liberty; effective 7/1/99
- Central Leasing Management; Spartanburg effective 7/1/99
- Gateway Warehouse; Spartanburg; effective 6/1/99
- Dr. David Dedmon; Spartanburg; effective 7/1/99
- Visiting Nurses Association; Bamberg; effective 6/1/99
- Carolina Center for Oral and Maxofacial Surgery; Spartanburg; effective 7/1/99
- Hudson & Associates; Spartanburg; effective 7/1/99
- AWSA, Inc. Auto Supply or ALLPRO; Charleston; effective 5/1/99

TERMINATIONS:

- The Provident/Araz Group; effective 9/1/99
- SOLO Benefit Fund; effective 8/20/99
- Ohio Heritage; effective 8/20/99
- Dempsey & Associates; effective 5/1/99
- Trotter & Sons; effective 4/1/99
- Carolina Children's Home; effective 7/1/99

Note: Effective August 1, 1999, the new address for PCN claims is: ***PCN, P.O. Box 101111, Columbia, SC 29211-1111.***

If you have questions about PCN, please contact Judy Legg, Network Coordinator, PCN at (803) 798-6207, extension 257 or statewide at 1-800-327-1021. You can also send an e-mail message to judy@scmanet.org.

PHYSICIAN RECOGNITION AWARDS

The following SCMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned.

Robert McAuley Alexander, MD
Timothy Michael Beittel, MD
Lesa Keen Bethea, MD
James Romey Bloodworth, MD
Sarah Holleman Brown, MD
Anne Cook, MD
Henry Paul Cooler, MD
Steven Marc Cremer, MD
Richard Hughey Crooks, MD
Gary Allen Delaney, MD
Kurt Richard Ellenberger, MD
Douglas Steven Ettin, MD
Richard Joel Friedman, MD
William E. Green, MD
Stewart Grizzard, MD
Elaine Mary Haule, MD
Stephen Alan Imbeau, MD
David Thomas Jones, MD
Imtiaz A. Khan, MD
Krista Marie Kozacki, MD
Anthony F. Lawson, MD
Arden Lynn Levy, MD
Woodrow Wilson, MD
Frank Lavern Lyman, MD
Allan R. MacDonald, MD
David Blair Mainman, MD
Elizabeth Fisher Mathias, MD
Frances Mixson McCarley, MD
John K. McGuirt, MD
Nick J. McLane, MD
Johannes Negash, MD
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Juan Olazagasti-Gonzalez, MD
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MEDICARE UPDATE

Consent Settlement for Medical Review Audits

Carriers under contract to Health Care Financing Administration are authorized to "...make audits (medical review) of records of providers of services as may be necessary to assure that proper payments are made..." under provisions of Title XVIII. Carriers are responsible for conducting reviews of providers to assure that claims have been billed and paid appropriately.

After a review has been conducted of a provider's ample of processed claims and overpayments have been calculated, the provider is notified of options for overpayment recoupment including consent settlement. Consent settlement documents allow a provider to choose options within 30 days for overpayment recoupment.

A Program Memorandum to carriers from the Health Care Financing Administration dated June 1999 states that current response time for providers will be extended **from 30 days to 60 days.** This revision will allow Part B providers a longer period to understand the review findings and to consider the options being provided by the contractors. The change took effect July 1, 1999.

Physician Coercion

Durable Medical Equipment Regional Carrier (DMERC) Certificates of Medial Necessity (CMNs) have two sections that require physician input. **Section B has questions concerning the medical condition of the patient**, the answers to which guide the DMERC as to the medical necessity of the condition of the patient, the answers to which guide the DMERC as to the medical necessity of the item being ordered. **The other section is for the signature of the physician**, attesting to the accuracy of the answers in Section B. The supplier is neither permitted to complete Section B nor tell the physician what answers to give. Suppliers have been known to engage in such activity and even coerce physicians into changing their answers in Section B. Incidentally, Section C of the CMN is supposed to be completed by the supplier before the physician signs the document, and is supposed to list the charges for the equipment being ordered.

If physicians become the target of coercive pressure or harassment by suppliers to justify through their orders or CMNs, medical equipment which is being directly marketed to their patients, they are encouraged not to betray their better medical judgement by acquiescing to such pressure, and reporting this behavior to the following DMERC contact:

DMERC Program Integrity Department Provider Hot Line: (803) 788-5414

Physicians are also encouraged to request copies of the relevant DMERC medical policies directly from the supplier of the items in question, or they may contact the manager of the DMERC Professional Relations Department, Elaine Hensley, for this material at (803) 735-1034, ext. 35745.

At the request of the physician members of the Medicare Carrier Advisory Committee, the DMERC medical director, Paul D. Metzger, M.D., has been providing summaries of the DMERC's Regional Medical Review Policies in the back of each Medicare Part B *Medicare Advisory* since April 1999. Physicians may always discuss aspects of medical policy concerning coverage of this equipment with Dr. Metzger, at (803) 735-1034, ext. 35706.

Medicare Enrollment Open House

If you have a problem completing Medicare's HCFA-855 enrollment form or would like help completing the HCFA-855, you may attend the Medicare Part B Provider Enrolment Open House. This is a great time of the year to attend if you are adding new doctors to your group due to medical school graduation. You do not have to register and there is no fee. Just show up and they will assist you!

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(Gift of Life, continued from page 2)

program. Please help ensure that every South Carolinian in need of a vital organ and/or tissue transplant will have the opportunity to receive this gift through generous and unselfish donations from the people of their community.

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BEHÇET'S DISEASE AND PHEOCHROMOCYTOMA

LESA BETHEA, M. D.*
SAIRA KHAN, M. D.

Behçet's disease is a chronic, relapsing multi-system syndrome in which the diagnosis is basically a clinical one. The International Study Group for Behçet's Disease 1990 criteria include recurrence of minor aphthous, major aphthous or herpetiform ulcerations at least three times during a twelve month period, plus two of the following: recurrent genital aphthous ulceration or scarring, eye lesions, skin lesions or a positive pathergy test.[1]

Though central and peripheral nervous system abnormalities have been described in Behcet's disease,[2,3,4] only one previous case of a pheochromocytoma in association with Behçet's disease has been reported in the English literature.[5] This paper describes the second case of such an association.

CASE REPORT

A 46-year-old black female was admitted to the hospital because of abdominal pain, fever, and malaise. Her past medical history was significant for a diagnosis of Behçet's Disease manifested by oral and genital ulcers, erythema nodusum, arthralgia, malaise, aseptic meningitis, a positive C-reactive protein and an elevated sedimentation rate. She had been treated intermittently with pulses of steroids for flares of her disease. Other medical history included a history of pelvic inflammatory disease and mitral valve prolapse. Her last echocardiogram showed myxomatous degeneration of the mitral valve leaflets with intermittent prolapse of the anterior leaflet of the mitral valve with mild mitral regurgitation, mild tricuspid insufficiency and mild pulmonary hypertension. She had a history of hospitalizations for three spontaneous vaginal deliveries, a bilateral tubal ligation and pyelonephritis.

Review of systems included a past hospitalization for chest pain during which she underwent cardiac catheterization which showed normal coronary arteries, severe systemic hypertension and concentric left ventricular hypertrophy, and hyperdynamic left ventricular systolic performance. Her ejection fraction was estimated at greater than 70 percent. Other problems included a recent history of amenorrhea and episodic diaphoresis, felt to be secondary to menopause. She had been placed on cojugated estrogen (Premarin®) and medroxy progesterone acetate (Provera®) with some improvement.

However, she continued to have episodes of palpitations, anxiety, diaphoresis, shortness of breath and fatigue. Evaluation of these symptoms had included a normal thyroid panel, a negative PPD and a normal chest x-ray. Medications at the time of admission included Geritol® with iron, an "energy tablet" from a local pharmacy and one aspirin a day. She denied any current or previous use of alcohol, tobacco or other drugs. She had been

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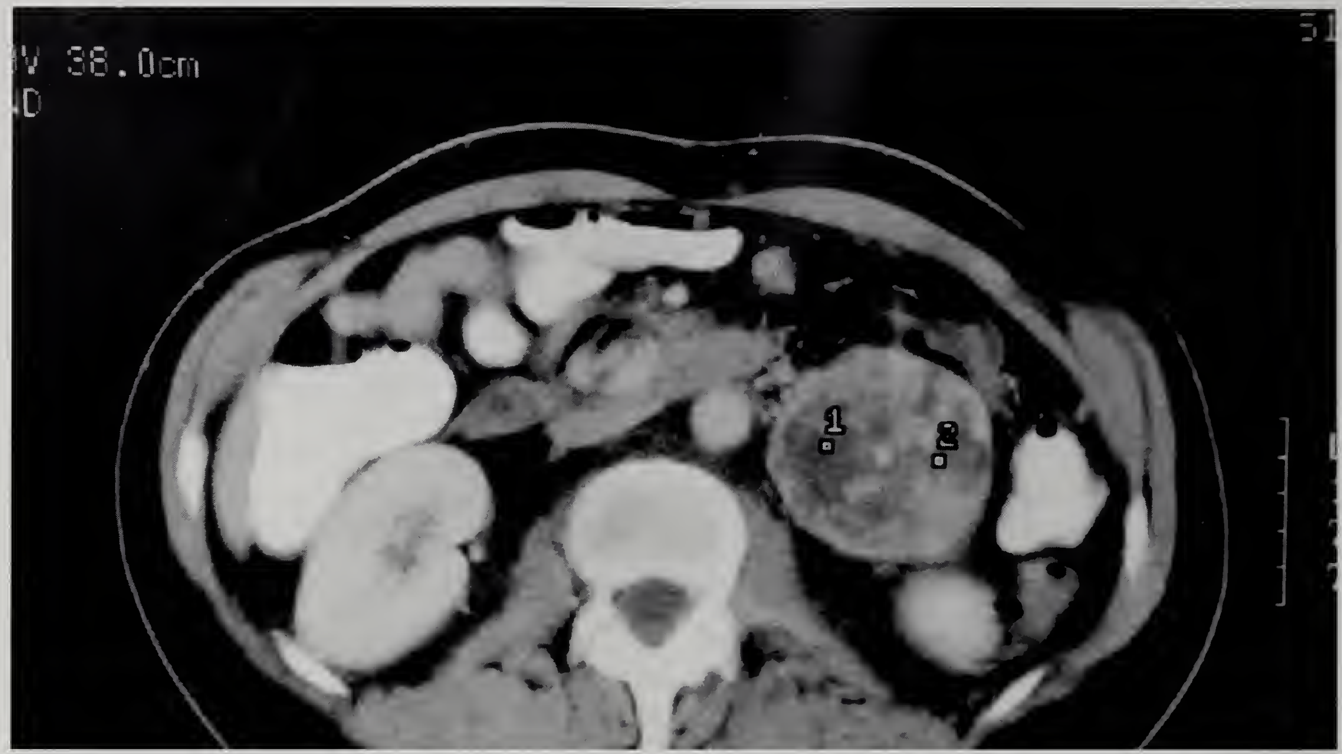

Figure 1. CT scan showing soft tissue mass adjacent to anterior lower pole of the left kidney.

employed for the past several years as a housekeeper at a local motel. She was divorced and lived alone except for her dog.

Her vital signs on presentation to the emergency room showed a temperature of 98.8 orally, blood pressure 133/91, pulse 91 and respirations 16. Physical exam at that time was significant for a thin, middle-age black female with diaphoresis, lethargy, mild diffuse abdominal tenderness and an old burn scar on her left upper arm Pelvic exam revealed several cervical mucosal ulcers. On initial laboratory evaluation, her complete blood count and electrolytes were normal. Urine pregnancy test was negative. Amylase and lipase were normal and her urinalysis showed 1+ (30 mg/dl.) protein, 2-5 WBC's, 0-2 RBC's, many epithelial cells and trace bacteria. Flat and upright abdominal films were read as a mild ileus, and her chest film was read as normal.

The patient was admitted with a primary diagnosis of abdominal pain for observation and further evaluation. During the patient's hospitalization, she began to spike fevers up to 1030 F (39.40 C). She had urine and blood cultured. She was started on nafcillin empirically to cover her for endocarditis because of her history of mitral valve prolapse.

She was scheduled for a transesophageal echocardiogram to evaluate her mitral valve for vegetations. However, she was noted to go into supraventricular tachycardia at a rate of 150-170 beats/minute with a blood pressure of 240/138 mm/hg with associated diaphoresis before this could be performed. This was successfully treated with verapamil.

At this point, the diagnosis of a pheochromocytoma was entertained and the patient underwent a CT scan of the abdomen and pelvis which showed a 6cm spherical soft tissue mass adjacent to the anterior lower pole of the left kidney with an irregular vascular periphery with areas of central low density arising from the left sided organ of Zuckerkandl (Figure 1). The general surgery service was consulted.

Subsequent aortogram revealed a hyper-vascular mass with major vascular supply arising from an anomalous vessel from the aorta just above the origin of the left renal artery with additional vascular supply arising from the inferior mesenteric artery as well as the L-3 lumbar artery on the left. Venous drainage was from the left renal vein. 24-hour urine collection revealed total urine metanephrines elevated at 5.87mg/24hours,

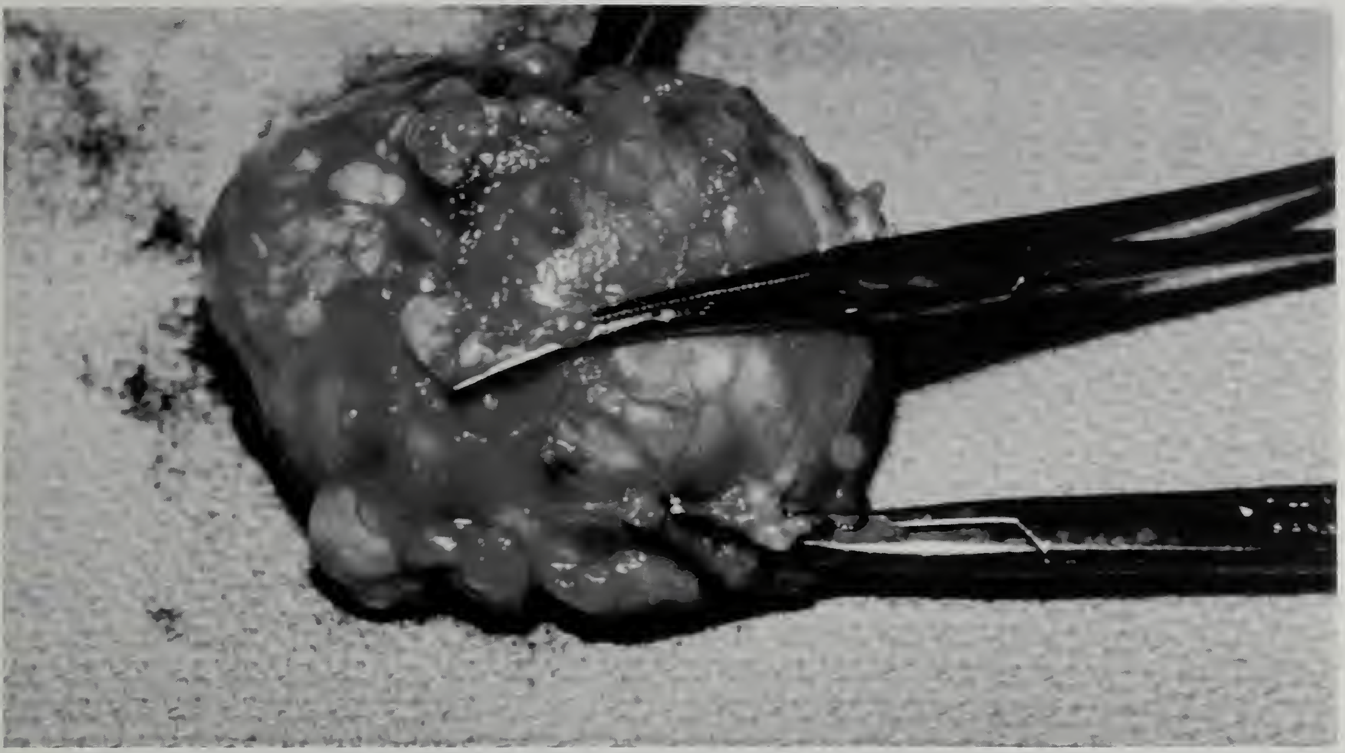

Figure 2. Pheochromocytoma—Surgical Specimen

vanillymandelic acid elevated at 12.9mg/24 hours, norepinephrine elevated at 1230mg/24 hours. Plasma norepinephrine was elevated at 4910 pg./ml. Urine epinephrine and dopamine were normal as were plasma epinephrine and dopamine.

The patient underwent surgery after alpha-blockade with 20 mg twice a day of phenozybenzamine and 50 mg twice a day of metoprolol. The surgical specimen was a discrete round fluctuant structure which weighed 120 gms, measuring seven cm at greatest diameter (Figure 2).

The pathology report showed anastomosing cords and rests of tumor cells with abundant, finely granular or eosinophilic cytoplasm. A richly vascular stroma with some spindling of tumor cells was present. Moderate nuclear pleomorphism was present. A thick fibrous capsule surrounded the tumor. The appearance was that of pheochromocytoma/paraganglioma. With a clinical origin in the Organ of Zuckerkandl, the tumor was considered an extra-adrenal paraganglioma.

At four years follow-up, our patient has not had a recurrence of her intermittent hypertension or any episodes of palpitations or documented supraventricular tachycardia. She does, however, continue to have symptoms and signs of Behçet's Disease and including oral and genital ulcers.

DISCUSSION

Six databases were searched for any previous cases of pheochromocytoma associated with Behcet's Disease. Only one other case report of an association between Beçhet's Disease and Pheochromocytoma could be located in our search. This case was reported by Oishi in the *Japanese Journal of Clinical Oncology* in 1989.[1] That patient unlike ours was a 32-year-old Japanese male with a history of Behçet's Disease manifested by joint pain, erythema nodosum, oral aphthous ulcers and fever. He presented with severe headache and palpitations of increasing severity. On further evaluation, plasma norpinephrine, urine norepinephrine, epinephrine total metanephrines and vanillylamandelic acid were all elevated. Abdominal ultrasound, computed tomography and magnetic resonance imaging confirmed a left adrenal mass. At surgery, the patient was found to have a 5.5 x 5.0 x 4.0 cm. left adrenal tumor weighting 100 grams.

Though central and peripheral nervous system abnormalities have been described in Behçet's Disease, only one previous case of an associated pheochromocytoma has been reported. Whether both these cases represent a coincidental finding or there is some basic pathophyciologic connection remains to be determined. It is known that five percent of cases of pheochromocytoma are associated with neurofibromatosis.[5] However, in our patient, removal of the pheochromocytoma did not cure the patient's Behçet's disease. It is therefore doubtful that her oral and genital ulcers were a neurocutaneous manifestation of her pheochromocytoma. This does not, however, exclude the possibility of a connection between the two diseases.

SUMMARY

A 46-year-old black female with a history of Behçet's Disease was admitted with a diagnosis of abdominal pain. She had complained of palpitations, diaphoresis, anxiety, and fatigue for years which had been variously attributed to the perimenopause and her Behçet's. During her hospital evaluation, she had an episode of supraventricular tachycardia associated with severely elevated blood pressure. Subsequent evaluation revealed a large pararenal mass which was found to be a pheochromocytoma. Search of six databases revealed this to be only the second case report in the English literature of a pheochromocytoma in association with Behçet's Disease.

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HUMAN MONOCYTIC EHRLICHIOSIS IN A THIRTEEN YEAR OLD: A CASE REPORT

SHELIA E. ROUNDTREE, M. D.*
GEORGE A. NIXON, M. D.

Canine ehrlichiosis was first presented in the literature by Donatien, et. al. in 1935 when they described an outbreak among Algerian dogs.[1] Human ehrlichiosis in the United States was initially cited in 1987 and since, more than 400 cases have been documented. Two basic types of human ehrlichiosis are now recognized: monocytic and granulocytic. Human monocytic erhlichiosis is caused by *E. chaffeensis*. Human granulocytic ehrlichiosis, recently characterized, seems to be a more severe but less common disease possibly due to *E. equi/ E. phagocytophila*.[2] This report concerns human monocytic ehrlichiosis.

Ehrlichia was initially isolated from a military recruit stationed at Fort Chaffee, Arkansas who presented with fever and chills subsequent to a tick bite. *Ehrlichia* are nonmotile, gram negative intracellular coccobacilli which bear semblance to rickettsiae and replicate via a mechanism analogous to chlamydiae.[3] Three isolates of *E. chaffeensis* have been identified using methods of molecular evaluation and include Arkansas, Jax and St.Vincent.[4]

The majority of cases of *E. chaffeensis* have occurred in the Southeastern and Middle Atlantic states and have been linked to tick bites by Amblyomma americanum (Lone Star tick). A few cases have been reported in the Rocky Mountain States, and victims have been identified in a total of twenty-one states.[5] The majority of cases are reported between the months of March and October when ticks are most prevalent. Human ehrlichiosis displays a variety of manifestations and may present as an inapparent infection, mild or life threatening illness. The clinical presentation is generally similar to that of Rocky Mountain spotted fever and usually includes fever, headache and malaise within a month of exposure to the tick.[5] *Ehrlichia chaffeensis* is particularly tropic for the monocyte.[7] Examination of the bone marrow has resulted in a wide variety of findings which range from hypoplasia to erythrophagocytosis.[8-9] Leukopenia and thrombocytopenia accompanied by mild hepatitis have been reported during the acute infection.

While the symptomotology is heterogeneous renal failure, respiratory insufficiency and central nervous system involvement may occur. Vanek et. al. report left ventricular dilatation and dysfunction in a 27-year-old man which resolved following a 10-day course of doxycycline supplemented with digoxin and furosemide.[10] A maculopapular rash is most commonly described in children.[6] Workers reviewed cases of 237 patients serologically diagnosed with either *E. canis or E. chaffeensis* over a five-year period. They found that 36.2 percent developed an exanthem; the exanthem was macular, papular or both in 62.3 percent, petechial in 19.5 percent and erythematous in 18.2 percent.[5] Gastrointestinal disturbances including anorexia, nausea and vomiting may occur more frequently in children while abdominal pain and tenderness have been reported with similar frequency in children and adults.[11] Myalgia and arthralgia are typical. CNS findings are common and may include gait disturbances, headache, hyperreflexia, cranial nerve palsies, seizures and lymphocytic pleocytosis in the cerebral spinal fluid.[12] Radiographic findings include interstitial prominence, alveolar opacities, consolidation and pleural effusion.

Serum aspartate aminotransferase and alanine aminotransferase levels rise in the majority of cases at some point during the illness. The average duration of the illness is twenty-three days. Like Rocky Mountain spotted fever mortality approaches five percent, and the elderly are at greater risk for more serious sequelae.[4] We present a 13-year-old patient from Sparta, Georgia who ultimately was diagnosed with *E. chaffeensis*.

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CASE REPORT

The patient, a previously healthy 13-year-old black male, presented to his local physician in Sparta, Georgia late in July with of complaints of subjective fever and vomiting of five days duration. Urinalysis was remarkable for large leukocytes and four plus protein. He denied symptoms of urinary tract infection but was treated empirically with a 10-day course of trimethoprim-sulfamethoxazole. The following week he presented to the emergency room with fever, chills, abdominal pain, nausea, and vomiting. Furthermore, the patient offered that his knees were tender and slightly painful during ambulation. He played outside and fished in a nearby lake occasionally but denied any exposure to trauma and maintained that he had not been bitten by a tick or any other insect during the season. He denied dyspnea, edema and diarrhea.

On physical examination, he was a well developed, ill appearing adolescent who lay still on a gurney with a temperature of 40.2 degrees C, heart rate of 120, respiratory rate of 22 breaths per minute and blood pressure 110/58. Tonsils were enlarged bilaterally but nonerythematous. The neck was supple with cervical adenopathy, and occipital adenopathy was noted on the left. The lungs were clear and respirations slightly labored. The abdomen was soft but tender to palpation without guarding, and mild rebound tenderness was illicited. Right costovertebral angle tenderness was noted, and bowel sounds were diminished in all quadrants. The knee joints were minimally tender to palpation without effusion or increased warmth. His skin was warm and dry without exanthem or petechiae. The remainder of the examination was normal.

His white blood count was 2,700/cmm with 59 segmented neutrophils, six bands, 25 lymphocytes, eight monocytes and two atypical lymphocytes. The hemoglobin was 14.3 with a hematocrit of 42 and a platelet count of 103/cmm. MCV was 78.8 . Alkaline phosphatase was 162, ALT 97, GGt 22 and AST 257. Serum electrolytes were normal.

He was admitted to the hospital for management of his fever, IV hydration and diagnosis. A tick borne disease such as Rocky Mountain spotted fever or ehrlichiosis was thought to be the etiology of the leukopenia, thrombopcytopenia and elevated temperatures. His treatment included doxycycline 100-mg b.i.d. with alternating p.o. and i.v. routes. He was afebrile by hospital day number six and reported that he felt much improved. Urinalysis on day seven revealed marked hematuria and protein greater than 300 grams. Leukopenia steadily improved until discharge on day eleven. He was discharged under the care of his mother and instructed to complete his courses of doxycycline and ferrous sulfate.

E. chaffeensis HME IGG was 1:2560 and HME IGM was 1:320 which is ample to support definitive diagnosis. Blood and urine cultures remained negative, as was the hepatitis core antibody. The serum assay for Rocky Mountain spotted fever was negative.

DISCUSSION

Ehrlichia chaffeensis is an intracellular microorganism taxonomically grouped with Rickettsiae, but distinguished by their unique tropism for circulating monocytes. The clinical spectrum of illness caused by their organism is wide and ranges from inapparent infection to life threatening disease. The clinical manifestations are nonspecific, similar to those seen in Rocky Mountain spotted fever and include chills, headache, myalgia and gastrointestinal symptoms. A characteristic exanthem is reported more frequently in children.

As with other Rickettsial infections, delay in diagnosis and treatment of ehrlichiosis may result in a poor clinical outcome. In the face of a high clinical index of suspicion, antibiotic therapy should be initiated. Even in the setting of timely therapy, severe complications may evolve; Weaver et. al. report noncardiogenic pulmonary edema and adult respiratory distress syndrome in a previously healthy 54-year-old school teacher whose therapy was instituted within 24 hours after the onset of symptoms.[13] The current recommendation for treatment is oral or IV doxycycline 100mg b.i.d. for adults or three mg/kg/day in two divided doses for children.[14] One should utilize the minimum effective dose in children in order to avoid undesirable side effects such as the staining of teeth. Centers for Disease Control diagnostic criteria include the following: a four-fold increase in *E. chaffeensis* titer with a minimum titer of 64, or a single high serum antibody titer (> 128) with a highly suggestive clinical history.[5] Although chronic ehrlichial infection is well documented in the veterinary literature, persistent human infection has been described in the literature only once.[14]

Avoidance of tick exposure constitutes the most effective method of prevention of infection. Persons in endemic areas who may be at increased risk are encouraged to wear lightly colored clothing for easy identification of unattached ticks. The wearing of long sleeved shirts and long pants is advisable. Use of insect repellant reduces the risk of infection.[15] Furthermore, a thorough body search should be conducted after outdoor exposure; all attached ticks should be removed from the skin via forceps. One should grasp the tick by its mouth to insure complete removal. Prophylactic antibiotic therapy is not currently recommended as there exists no literature to support this. As tetracycline is bacteriostatic, it may only delay the onset of signs and symptoms.[12]

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INFECTION WITH CHLAMYDIA PNEUMONIAE AND ATHEROSCLEROSIS: A REVIEW

MOHAMMAD REZA MOVAHED, S.P., M.D.*

Atherosclerosis is a complex pathological process that consists of a reaction of the vascular wall and blood components to injury inflicted by a diversity of agents including abnormal lipids, chemicals and infectious agents. In the last several years a number of reports have focused on the potential role of one microorganism, *Chlamydia pneumoniae,* in atherosclerosis. It has been suggested that chronic infection with *C. pneumoniae* in the arterial walls contribute to the development of atherosclerosis. The goal of this paper is to review current available studies and summarize the findings.

Chlamydia pneumoniae, strain TWAR has been identified as a third species of *Chlamydia* distinct from *C. trachomatis* and *C. psittaci* that were isolated in 1965 in Taiwan and between 1983 to 1986 in Seattle, WA, principally, as respiratory pathogens.[1,2] This obligatory intracellular, gram-negative bacteria is difficult to grow in cell cultures or eggs and has low virulence to mice (Kuo et. al. idem). Infection is usually absent under the age of five years. The incidence of infection is about 10 percent between the ages of five to ten years. The annual rate of infection is 1.5 percent and 50 percent of population is seropositive for *C. pneumoniae* by the age of 20. Considering that *C. pneumoniae* specific antibodies disappear after three years, 50 percent prevalence at age 20 suggests chronic infection. However, cross reactive antibodies to other proteins such as gram negative bacteria, heat shock protein and other chlamydia species occur which can be an explanation for the high prevalence of positive serology for *C. pneumoniae* in the population. Current available studies on the association between *C. pneumoniae* and atherosclerosis can be divided in five major groups: serological studies (basic and clinical), pathological studies (histology, electron microscopy, PCR,), cell cultures, animal models, and the use of antibiotics.

SEROLOGICAL STUDIES

Most of serological studies have demonstrated a positive correlation between *C. pneumoniae* serology and atherosclerotic disease. One of the first study investigating *C. pneumoniae* and atherosclerosis association was published by Finnish investigators.[3] Forty males with acute myocardial infarction (AMI) and 30 males with history of coronary artery disease (CAD) were studied in comparison to 40 matched control. Positive serology for IgG and IgA occurred in 68 percent of patients with AMI, in 50 percent with CAD and in 17 percent of controls. Three groups investigated the association between angiography, documented CAD, and *C. pneumoniae* titers. High IgG and IgA titers were found to be associated with CAD[4-6] and the severity of CAD.[6] One of the largest serological studies was conducted by using Helsinki Heart Study patients.[7] From 2046 participants in the gemfibrozil group and 2035 in the placebo arm, 140 patients had myocardial infarction or sudden death. One hundred and three patients had blood samples collected three to six months before their AMI or sudden death. They were compared with a matched controlled group for time of end point, locality and treatment in respect to serology titers to *C. pneumoniae* and found that high IgA antibody titers were associated with 2.7 times higher risk for CAD. This remained significant even after adjustment for other risk factors. However, the IgG titer was not associated with CAD. Two studies have compared patients with stroke and transient ischemic attack (TIA) with control in regard to C. pneumoniae serology. Chronic[8,9] and acute infections (acute *C. pneumoniae* infection was defined by IgG titer >512 or IgM titer >8, or 4 folds increase in IgG titer) were found to correlate with

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the occurrence of stroke or TIA.

Recent studies have used serum available from two large cohorts, the American Physician Health Study involving 22071 healthy physicians, and the British Physician Health Study involving 2512 healthy physicians. These two groups have randomized healthy physicians taking aspirin, beta-carotene or placebo over 12 or 13 years. The British study found that only the *C. pneumoniae* IgA titer (and not the IgG titer) was significantly associated with the occurrence of CAD (OR 1.8).[10] The American Physician Health Study group only measured IgG titer that was not associated with CAD. Unfortunately IgA titer was not measured.[11] One study on the role of *C. pneumoniae* in atherosclerosis conducted in Israel found no correlation between IgG or IgA serology for *C. pneumoniae* and the occurrence of acute myocardial infarction [12], but only 302 patients were enrolled and they did not exclude patients with acute respiratory infections.

The first study about rising of *C. pneumoniae* IgG, IgA and IgM titers after angioplasty was conducted by a group in Austria that found a significant rise of antibody titers in all three antibody classes one and five months after percutaneous coronary angioplasty (PTCA).[13] Another group did not find any correlation between *C. pneumoniae* IgG antibodies and CAD in comparison to age and smoking in matched groups 14 but the IgA or IgM serology was not studied. They also investigated CMV and *H. pylori* serology, which was also not related to the occurrence of CAD. *C. pneumoniae* serology and pathological specimens were studied in 60 Alaska natives who died of non-cardiac cause. A strong correlation between IgG serology and atherosclerosis with OR of 9.4 was found.[15] Ossewaarde *et al.*[16] looked at *C. pneumoniae*, CMV and *H. pylori* serology in patients with CAD and matched controls and found that only *C. pneumonia* was correlated with the occurrence of CAD with an OR of 2.76.

There are few investigators that have studied an association between *C. pneumonia* serology and abnormal lipid profiles. High triglyceride levels in nonsmokers[17], low HDL and high LDL in men have been found to correlate with high *C. pneumoniae* serology.[18]

PATHOLOGICAL STUDIES

A study from South Africa was the first to describe *C. pneumoniae* present in atherosclerotic wall of lower extremity arteries.[19] Other groups confirmed their findings. Kuo *et al.* found that six of 17 fibrotic plaques were positive for *C. pneumoniae* antigen by using immunohistochemistry staining. *C. pneumoniae* particles were located in macrophages and smooth muscle cells from atherosclerotic plaques.[20] A group from Seattle, Washington found *C. pneumonia* in all five atherosclerotic plaques obtained from carotid artery using immunohistochemistry staining, and 31 percent were positive using polymerase chain reaction (PCR).[21] *C. pneumoniae* has been isolated from atherosclerotic plaques and intima thickening of coronary arteries but not from normal artery wall.[22] *C. pneumoniae* particles and DNA have been found in aortic aneurysm,[23-25] coronary, carotid and iliac arteries [25-28] with atherosclerosis but normal artery walls were negative.[27] *C. pneumoniae* could also be isolated from other tissues such as lung, spleen, liver and granuloma[27] suggesting chronic indolent infections in different organs. *C. pneumoniae* has been identified in macrophages, smooth muscle cells and endothelial cells that were migrating into the plaque.[28] Marked cell-mediated and humoral immunity to *C. pneumoniae* was detected in males with coronary artery disease.[29] Simultaneous occurrence in the same patients of positive antibody titer and infectious particles in atherosclerotic plaque has been confirmed for *C. pneumoniae* but not for *H. pylori*.[30] *C. pneumoniae* could also be detected in severely diseased stenotic aortic valves requiring surgery but rarely in normal valves.[31]

Two studies did not find a correlation between *C. pneumoniae* infection and atherosclerosis. Paterson *et al.* could not find any *C. pneumoniae* particles in 17 carotid and 16 coronary specimens obtained from autopsy using PCR.[32] Lindholt *et al.* also failed to detect any *C. pneumoniae* DNA using PCR in 20 aortic aneurysm specimens.[33]

CELL CULTURES

Numerous cell culture studies have contributed to *C. pneumoniae* and atherosclerosis research. At least three different isolates of *C. pneumoniae* were capable to multiply in cultures of endothelial cells from human umbilical vein.[34] *In vitro* endothelial cells, smooth muscle cells and macrophages were capable of supporting *C. pneumoniae* growth.[35] Ramirez *et al.* could isolate viable *C. pneumoniae* from a plaque and was able to culture it.[36] *C. pneumoniae* could infect cultured human venous endothelial cells and that caused enhancement in platelet adhesion to the infected cells.[37] A genetic study showed that the outer membrane protein (Omp) in a coronary strain was different from that of the respiratory type of *C. pneumoniae*.[38] Other investigators were able to demonstrate enhanced expression of endothelial adhesion molecules (ß1-, and ß2-integrins, E-selectin, ICAM-1 and VCAM-1) in *C. pneumoniae* infected endothelial cells.[39]

ANIMAL MODELS

Using different animal models, many investigators could induce atherosclerosis by infection with *C. pneumoniae*. *C. pneumoniae* was able to infect 25-100 percent of apoprotein-E deficient mice by intranasal inoculation and *C. pneumoniae* particles were detected within atherosclerotic lesions in the aorta after the infection.[40] In another study, six of nine intranasal infected rabbits showed inflammatory changes in intima or fibroid plaques resembling atherosclerosis two to four weeks after infection. No lesions were seen in the control animals.[41] LDL receptor deficient mice develop atherosclerosis after high cholesterol diet. Infection with *C. pneumoniae* in these animals fed with cholesterol free diet for nine months, showed no atherosclerotic lesions. However after high cholesterol diet, *C. pneumoniae* infection significantly exacerbated atherosclerosis in comparison to non-infected animals.[42] Interestingly only the AR39 strain and not the MoPn strain of *C. pneumoniae* was capable to enhance atherosclerosis suggesting that certain strains of *C. pneumoniae* may be more apt to be involved in atherogenesis. Infection of macrophages with *C. pneumoniae* followed by LDL caused a marked increase in the number of foam cells within 22 hours indicating the potential role of cholesterol as a cofactor for *C. pneumoniae* induced atherosclerosis.[43]

ANTIBIOTIC STUDIES

There are only a few studies available using antibiotics in patients with coronary artery disease and in animal models. Azithromycin is a potent *C. pneumoniae* antibiotic which has been used in most of the studies. The earliest successful antibiotic usage was published in 1997. Gupta *et al.*[44] have studied 213 consecutive male survivors of myocardial infarction. They were screened for *C pneumoniae* antibody titer and were divided in three groups: 59 patients with no detectable *C. pneumoniae* antibodies, 74 patients with an intermediate titer (1/8-1/32) and 80 patients with a high titer (>1/64). Patients with high titer were randomized to receive oral azithromycin for three-six days (32 patients) or placebo (20 patients). After 18 months a significant higher risk of myocardial infarction (MI) was found in the groups with higher titer (7 percent in normal titer, 15 percent in intermediately elevated titer and in 30 percent with highest titer).The risk of MI was four times higher in untreated patients in comparison to treated group. Azithromycin treated patients had the same event rate as intermediately elevated anti *C. pneumoniae* titer group. In another study, doxycycline failed to decrease *C. pneumoniae* titer in patients who had a history of coronary bypass surgery after four months of treatments.[45] However, they did not investigate any clinical end point. A group from Argentina used roxithromycin which is similar to azithromycin in their study.[46] Two hundred and two patients with unstable angina were randomized to receive roxithromycin or placebo for 30 days. Active treatment was completed by 64 percent of patients. During treatment the *C. pneumoniae* titer did not change despite a decrease in C-reactive protein titer. However, the risk of reinfarction and death was significantly decreased after one and three months but remained only a trend after six months (9 percent and 4 percent versus 2 percent and 0 percent at day 30; 12.5 percent and 6.25 percent versus 4.37 percent and 0 percent at day; 90 and 14.6 percent and 7.29 percent versus 8.69 percent and 2.17 at day 180). Despite these encouraging studies, a recent study involving 302 patients with history of coronary artery disease and positive *C. pneumoniae* titer who were randomized to placebo or azithromycin 500 mg for three days, 500 mg/week for three months, did not show any differences in clinical events rate. Interestingly most markers of inflammation were reduced at six months.[47] A recent population based case control study[48] examined the possibility that antibiotics could reduce the risk of cardiac events. They evaluated the effect of previous use of tetracyclin, macroide, sulfonamide, quinolone, penecillin, or cephalosporin antibiotics on the risk of a subsequent first acute myocardial infarction. They include the records of approximately three million patients enrolled in more than 350 general practices in United Kingdom. A total of 3,315 cases of first-time acute MI (between 1992 and 1997) and 3,139 matched controls without MI were analyzed. Tetracyclin use was associated with 30 percent reduction in the odds of a first acute MI and quinolone use with 55 percent reduction. No trend was found for the use of macrolides, sulfonamides, penicillin or cephalosporins.

The first animal model using antibiotic treatment was conducted by Muhlestein *et al.*[49] Thirty rabbits were given intranasal *C. pneumoniae* or saline three times for three weeks. Infected and control animals were randomized to seven weeks of azithromycin treatment or no therapy. Three months after infection aortas were removed and evaluated blindly. An increase in intima thickening was found in infected rabbits while azithromycin treated rabbits were protected from those changes.

Two large multicenter trials are currently underway to evaluate any protective effect of azithromycin in patients with coronary artery disease and positive *C. pneumoniae* titer. One is the weekly Intervention with Zithromax against Atherosclerotic Related Disorder (WIZARD) trial involving 3,500 patients with prior MI and *C. pneumoniae* antibodies for a period of 2.5 years. The second trial is the Azithromycin and Coronary Event Study (ACES) enrolling 4,000 patients with CAD in more than 20 centers throughout the United States. Patients will be treated with azithromycin or placebo for one year, and their outcome will be followed for four years.

SUMMARY

There are numerous studies that were able to find *C. pneumoniae* infections as a contributing factor in atherosclerosis pathogenesis. Positive serology for *C. pneumoniae* was found in most studies in patients with atherosclerosis (IgG, IgA, IgM). Most studies were able to correlate an elevated IgA antibody titer rather than the IgG titer to the risk for atherosclerosis. *C. pneumoniae* and its components (DNA, antigens) were detected in atherosclerotic plaques using immunohistochemistry, PCR, electron microscopy and cell cultures. *C. pneumoniae* has been located in endothelium, smooth muscle cells and macrophages of arterial wall with atherosclerosis but not in normal arteries. Cellular models have shown that *C. pneumoniae* is able to replicate in endothelium, macrophages and smooth muscle cells. A high *C. pneumoniae* antibody titer was found to correlate with high level of LDL and triglycerides and low level of HDL. *C. pneumoniae* infection increases platelet adhesion and adhesion molecules at the surface of endothelium. *C. pneumoniae* could be a cofactor for atherosclerosis combined with high level of lipids as shown in an animal model but not alone. Strong cellular and humoral immunity have been found in men with atherosclerosis and positive *C. pneumoniae* titers. This organism could be found in diverse arteries with atherosclerosis. One particular *C. pneumoniae* strain (AR 39) appears to be more frequently involved in atherosclerosis. Antibiotic treatment with azithromycin appears to be protective against atherosclerosis complications. However, there is as yet no conclusive evidence that *C. pneumoniae* causes atherosclerosis, but most likely it may enhance this process. Two large randomized clinical trials are currently underway evaluating azithromycin treatment in patients with atherosclerosis which will hopefully give us answers about the role of antibiotic treatment.

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Editorials

DOES INFECTION CAUSE ATHEROSCLEROSIS—AND MOST OTHER DISEASES?

One of my teachers, the late Thomas Evans Brittingham of Vanderbilt University, maintained that more diseases are infectious than most of us are willing to admit. He refused to accept, for example, that systemic lupus erythematosus or Hodgkin's disease were sufficiently well-understood to allow confident diagnosis and treatment. Dr. Brittingham was usually iconoclastic and often right.

In this issue of *The Journal,* Dr. Reza Movahed summarizes current evidence that *Chlamydia pneumoniae* might cause at least some cases of atherosclerosis. The evidence includes the presence of antibodies against *C. pneumoniae* in patients with coronary disease; the identification of *C. pneumoniae* in plaques; the production of experimental atherosclerosis using *C. pneumoniae* in animal models; and the suggestion that patients with coronary disease who received antibiotics did better than those who did not receive antibiotics. All of these studies are tantalizing.

Although some studies indicate a low prevalence of *Chlamydia pneumoniae* in atherosclerotic plaques, the preponderance of evidence points to a clear-cut association.[1,2] Whether the association is causal remains another matter. Is the presence of *Chlamydia pneumoniae* in atherosclerotic lesions a mere epiphenomenon—a benign colonization by the microorganism at an already diseased site? Or does *C. pneumoniae* cause or perpetuate the accumulation of lipids and inflammatory response that characterizes the mature plaque? These important questions will be difficult to answer. Especially needed is a primate model, but apparently no such model is being studied at this time.

Efforts to demonstrate infectious causes of diseases thought previously to be of non-infectious etiology have gained considerable momentum in recent years. A selective brief summary, based on Dr. Bennett Lorber's review of the literature, [3] is as follows:

- *Peptic ulcer disease*: In 1984 Drs. Barry J. Marshall and J. R. Warren of Australia reported that "unidentified curved bacilli" were associated with peptic ulcer disease. The association of the organism now known as *Helicobacter pylori* with peptic ulcer disease, chronic gastritis, and low-grade B-cell lymphomas ("maltomas") of the gastric mucosa is now well-established. However, the cause-and-effect relationships, the strain differences among *Helicobacter* isolates, and the therapeutic implications present many unresolved issues, attracting the attention of numerous investigators throughout the world.
- *Spongioform encephalopathy*: There are four recognized types of human spongioform encephalopathy: Creutzfeldt-Jakob disease, kuru, Gerstmann-Sträussler disease, and fatal familial insomnia. Experimental studies indicated that two of these (Creutzfeldt-Jakob disease and kuru) could be transmitted to animals by the injection of extracts of diseased brains and that these might be "slow virus" diseases. Then it was shown that spongioform encephalopathy may be caused by tiny bits of protein devoid of amino acids, known as "proteinaceous infectious particles" or "prions." Thus, we now have the fascinating possibility that at least some cases of chronic neurodegenerative diseases are of infectious origin.
- *Bell's palsy*: We now have evidence that many, perhaps most cases of Bell's palsy are caused by herpes simplex virus type 1 (HSV-1). Other cases are clearly associated with Lyme disease, caused by the spirochete *Borrelia burgdorferi.*
- *Hemolytic-uremic syndrome*: It now seems that up to 75 percent of cases of this important syndrome in children represent complications of infection by *E. coli* 0157:H7, famously associated with the ingestion of undercooked hamburgers.
- *Vasculitis*: The hepatitis B virus is associated, serologically at least, with up to 25 percent of cases

of polyarteritis nodosa. The hepatitis C virus is associated with an even higher percentage (perhaps up to 91 percent) of cases of mixed cryoglobulinemia. At least some cases of Wegener's granulomatosis respond to trimethoprim-sulfamethoxazole, suggesting an infectious etiology.

- *Inflammatory bowel disease*: Recent studies strengthen the suspicion that Crohn's disease may be of infectious etiology. Candidate agents include a paramyxovirus and *Mycobacterium paratuberculosis.*
- *Diabetes mellitus*: Clinical and epidemiologic studies suggest that enteroviruses may trigger the onset of insulin-dependent diabetes mellitus.
- *Cancer*: Well-established associations include hepatitis B and C viruses with hepatocellular carcinoma; human papilloma virus with carcinoma of the cervix; the Epstein-Barr virus with Burkitt lymphoma, nasopharyngeal carcinoma, and AIDS-associated lymphoma of the central nervous system; and *Helicobacter pylori* with maltoma and carcinoma of the stomach. Recently, human herpesvirus 8 has been associated with Kaposi's sarcoma.

Lorber describes these demonstrations as "a quiet scientific revolution" that raises the exciting possibility that a large fraction of human maladies may ultimately prove to be vaccine-preventable.

The link between infections and chronic disease may ultimately prove to be of basic biologic significance. Attracting a great deal of attention recently has been the "new germ theory" outlined by Professor Paul Ewald of Amherst College. Ewald's thesis has been explained in lay terms as "the germ theory, part II."[4] Part I of the germ theory, according to this dichotomy, is best summed up by Koch's postulates—the time-honored way to go about proving that a disease is caused by an infectious agent. Part II of the germ theory relates to the evolutionary biology of both pathogen and host. Put simply, it is to the survival advantage of pathogens that do not spread readily from one person to another by a way of a vector (such as a mosquito) that they cause relatively low-grade, chronic illness. If this thesis proves to be correct, it will surely change the way we think about, diagnose, and treat many and perhaps most chronic ailments.

Thus, the possibility that atherosclerosis might be due to *Chlamydia pneumoniae* is but one aspect of a new chapter in our search for the causes of common diseases. I suspect that my former teacher, Dr. Brittingham, would be fascinated by all of these developments.

—CSB

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A Checklist for Managed Care Contracting

A Service of the Medical Economics Department

General Contractual Issues

- How long has the Managed Care Organization (MCO) been in existence?
- Who are the officers and directors of the MCO?
- What type of entity (Health Maintenance Organization, Preferred Provider Organization, etc.) is the MCO?
- Does the MCO have a business plan that the practice can review?
- Did the MCO operate profitably in the last fiscal year?
- Who is the Medical Director for the MCO in South Carolina? Is he/she currently licensed to practice medicine in South Carolina? Where is this person physically located and what is his/her medical specialty?
- Does the MCO have professional liability insurance? If so, with whom, in what amount, and with what scope of coverage?
- Have any judgments or settlements been filed regarding the MCO in the last three years? Are there any lawsuits, claims, or regulatory investigations currently pending against the MCO?
- How many enrollees does the MCO have in the practice's geographic regio Provide a list of the participating physicians, hospitals, and ancillary providers in the practice's area. What is the annual turnover rate among physicians enrolled with the MCO in South Carolina? How many physicians have terminated their contracts with the MCO in past few years and why?
- How many local physicians in the practice's specialty are currently contracted with the MCO?
- Which employer groups in the practice's area have contracted with the MCO?
- Does the MCO have a 24-hour toll-free number or an Internet website for the practice to access for coverage/eligibility questions? Does the MCO have a 24-hour customer service number for patients as well?
- Has the MCO provided all documents, manuals, appendices, etc., that were referred to or incorporated by reference into the managed care contract?

Specific Contractual Issues

- Are all parties to the contract clearly identified?
- Have all blank spaces been filled in?
- Is the term of the contract clear? Does the term of the contract automatically renew without the consent of the practice? Is the process for termination understood? If there is a termination without cause provision, what is the notice period? Are the grounds for termination with cause clearly stated? Does that provision allowing termination with cause require the MCO to provide the practice with adequate notice and opportunity to cure or correct the alleged problem?
- What range of services is covered by the contract? Are there any services that the MCO does not cover in any instance (i.e. experimental procedures or drugs)?

Continued on next page

- How does the practice file claims? Does the contract specify that claims must be filed within a certain amount of days after the date of service? If so, what is this time period, and is there a penalty to the practice if claims are not filed within this time frame? Is there any electronic filing, and if so, is there any additional charge related to electronic filing?

- Can the practice bill the patient directly for co-payments and non-covered services?

- If the practice is being paid on a discounted fee for service basis, is it clear how this discounted fee is determined?

- If payment is by capitation, does the contract specify the precise set of services covered by the capitation, when the capitation will be paid, provisions for stop-loss insurance, whether payment can be increased, and under what circumstances?

- If the plan has a withhold, is the amount of the withhold clearly spelled out? Are the circumstances under which the withhold will be returned addressed, and is the time period for return of the withhold made explicit? What is the MCO's track record for returning withholds?

- If the practice is to be a "gatekeeper," what additional administrative or other obligations are required? Is the practice compensated for this?

- Are the practice physicians required to be Board certified or eligible?

- What availability requirements does the contract impose? Is the practice required to substitute a provider when not available? Must this alternative provider also be a participating physician?

- What limitations are there on referrals to other providers? Can the practice refer to any physician or must all physicians be in the network?

- Does the contract provide any protection to the practice for retroactive denials?

- What are the MCO's billing and payment procedures? Does the contract specifically require the MCO to pay claims within a certain time period? If so, what is this time period, and is there a penalty to the MCO if "clean" claims are not paid within this time period?

- Can any of the reimbursement or billing procedures be changed by the MCO without the practice's prior written consent?

- How are disputes resolved? Does the practice have the right to participate in the resolution of disputes between the patient and the MCO?

- What is the mechanism for changing the terms of the contract? Can any provision be changed without the consent of the practice?

- Is the coordination o benefits provisions clearly stated? How will the practice be reimbursed when the MCO is the secondary payor?

- Are the utilization review procedures clearly stated? Is there a physician on the utilization review committee? Is this physician within the same specialty as the practice? Who has the right to appeal the utilization review decisions?

- What are the notice periods for accepting or declining new patients?

- Under what circumstances may the contract be assigned? Do assignment provisions apply to both parties or just to the MCO? What, if any, consent is required from the other party? What provisions exist for assignment by the practice in case of merger with or acquisition by another health entity?

- Is there a hold harmless or indemnification provision in the contract? If so, has the practice checked with its professional liability carrier to ascertain the effect of this provision?

The SCMA's Practice Management Services, Inc. (PMSI) can provide your office with a copy of the *South Carolina Physician's Guide to Managed Care Contracts* for a nominal fee. PMSI will also mail you the model managed care contract that combines legal language along part of the page with a layman's explanation along the other. For either of these publications, please contact Anne Harvin Gavin at (803) 798-6207 or statewide at (800) 327-1021, extension 260.

On the Cover:

RODERICK MACDONALD, M. D. (1898-1985)

This month's cover story was almost written for me (edited slightly for space and current use) in 1987 by Dr. Macdonald's family at Dr. Thomas Leland's request for biographical information on South Carolina physicians, especially past presidents of the Association. I add a few details overlooked by the family from Dr. Macdonald's own sketch of his life. He attended his first SCMA meeting in Spartanburg, SC in 1925 (two years after he graduated from medical school). While president of SCMA, the Blue-Cross/Blue-Shield Insurance Group was organized. His SCMA presidential address suggested the formation of a Grievance Committe (later the Mediation committee) which he was appointed to chair. He also served on the Advisory Committee to the S. C. State Board of Health relative to expenditure of Hill-Burton funds. Dr. Macdonald lists as his hobbies: growing roses, history and studying ophthalmology.

Born on September 1, 1898, in Blackstock, South Carolina, once a thriving railroad village, Roderick Macdonald . . ., like his father who was from Scotland, adored the rolling fields of Fairfield County, the farmlands his father owned, and the church.

As a child, he knew that he wanted to practice medicine. When he was five years old, he performed what he later smilingly called his first surgery. He cut a poodle's bangs, afraid that the dog couldn't see. Early, too, he came to know and understand the vicissitudes of life. He listened to his grandmother's stories about the Union Army coming through the South; he saw his father's store burn and the price of cotton drop to 5 cents a pound; he had to borrow money to study medicine which he later explained to his wife was "a jealous goddess." But his abiding faith, compassion, sense of humor, and integrity sustained him throughout his life.

He often fondly reminisced about his college days at the University of South Carolina where he studied and tutored fellow students in history in exchange for buckets of coal (fuel for his room on the horseshoe). He often told stories of his experiences there. "I sold my prized heifer at the State Fair in order to buy a suit of clothes to enter the university," he would explain. . . .

During his university days, he joined the Army and served as First Lieutenant of Infantry in World War I. He journeyed to Plattsburg, New York, and Camp Grant, Illinois. "It was cold," he would relate, "different from the Southland." Macdonald was proud of being a Scot and of being a Southerner. A history buff, he could recount the battles of the American Revolution, the origin of South Carolina's historical churches, and tales of his Scottish ancestors. He enjoyed the clan gatherings on Grandfather Mountain.

In 1934 Dr. Macdonald moved to Rock Hill where he opened a practice and *remained until he died on July 27, 1985, ten days after he closed his office.*

Medicine was a life-long career for Roderick Macdonald. He chose Ophthalmology and Otorynolarngology as his fields of specialty and throughout his career took many courses throughout the United States and Europe which would further his education in his chosen specialty. *In many ways, Dr. Macdonald's hobbies were really an extension of his profession. He avidly read medicine, medical books filling his library shelves.*

In addition, he enjoyed trains. He was a Southern Railway Surgeon. He also enjoyed going to the symphony. He gave generously to colleges, Thornwell Orphanage, and to his church, Oakland Avenue Presbyterian, where he was an elder for many years.

He was a member and officer of many societies, in both the medical profession and in other fields. He was president of the South Carolina Medical Association [in 1949-1950] *and was a past president of the South Carolina Society of Ophthalmology and Otolarynology. He was also Secretary-Treasurer of that Society for 25 years. He was a member of Council* [1937-1948 & 1963-

1967] *and Chairman of the Council* [1947-1949] *of the South Carolina Medical Association and a member of the S. C. Board of Medical Examiners. He was Past President and Secretary-Treasurer of the York County Medical Society, as well as a member of the York County Hospital Board of Trustees. He was one of the organizing founders of the York County Hospital. . . . .*

Compassion and kindness were two of his outstanding features. He had a way with people. He could talk to anyone. Often to coax children into letting him put drops in their eyes, he would show them Pop-Eye, a wooden statue carved by one of his beloved patients. "Everybody loved Dr. Macdonald" was the sentence friends and relatives used as they gathered for his funeral in the summer of 1985, just a short time before his 87th birthday.

And to his four children: Roderick Macdonald, Jr., M.D., Ophthalmology; Rose Macdonald, musician and therapist; Mary Macdonald, teacher and composer; and Martha Benn Macdonald, college instructor and writer, Dr. Roderick Macdonald bequeathed a deep sense of honor, integrity, and responsibility.

by Martha Benn Macdonald

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Alliance Page

AMA ALLIANCE 1999 ANNUAL SESSION
CHICAGO, IL

South Carolina was well represented this year for the American Medical Association's Annual Session held at the Drake Hotel. We were represented by six state delegates: Shirley Meiere, 1999-2000 SCMAA President; Gail Delaney; Stephanie Evans; Debbie Knight; Ruth Anne Lawson; and Laurie Schwarz. Alternate Delegates were Alexis Alia and Betty Hester. Dee Jewell, who served on the AMA Foundation for the AMA Alliance and Hope Grayson, Chairman of the AMAA Membership Committee, were also present from South Carolina.

Our session began on Sunday, June 20, 1999, and we were privileged to attend the Opening Ceremony at the AMA House of Delegates. As you are most likely aware, Dr. Randy Smoak of Orangeburg was introduced as President-Elect of the American Medical Association. As he is the first physician from South Carolina to hold this office, it was an especially proud moment for all of us!

During the Plenary Session on Sunday afternoon, HAP awards were given and Greenville, South Carolina accepted the National Award for their Health Project this year, "Beanie Baby Drive"—Kids Helping Kids! Mrs. Elizabeth Troutman travelled from South Carolina and gave a touching account of this project. Again, we were all very proud. Once again, South Carolina shined!

The 76th Opening Meeting of the AMA Alliance Annual Session began on Sunday afternoon. Colleen Adam of Nebraska presided as President. Nominations for the 2000 Nominating Committee were introduced and Dee Jewell of York County, South Carolina, was among the nominees. Dr. Nancy W. Dickey, Past President of the AMA, was present to speak to us.

We attended Reference Committee Hearings (Policy Resolutions), Budget, Bylaws, and Health Issues in smaller groups. We voted on resolutions to become policy. The AMA Foundation thanked delegates for the contribution of **$1,434,970.97** this year! This is an increase of $100,000!

Alexis Alia, Immediate Past SCMAA President, delivered an invigorating State Report to the House of Delegates. She proudly announced that South Carolina had seven counties this year who increased AMAA membership by five percent.

Hope Grayson of Charleston was installed as AMA Alliance Field Director for 1999-2000. Ann Hansen, the AMAA President, has made school violence her focus for the upcoming year. We are all enthusiastic as we close this Annual Session and go home to implement our goals for the year!

Gail H. Delaney, Chair, SC Delegation,
AMA Alliance 1999 Annual Session

Classifieds

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

HOW LONG WILL $1,000,000 LAST?

$1,000,000 sounds like a lot of money. That's because we're used to thinking in terms of *income* rather than *capital.* However, if we consider the income that $1,000,000 will produce, it doesn't seem like much. This table shows how many years $1,000,000 will last.

	INTEREST RATE		
MONTHLY INCOME	***6%***	***8%***	***10%***
$5,000	27.0	38.0	Forever
$6,000	20.0	24.8	36.0
$7,000	16.0	18.7	23.0
$8,000	13.4	15.1	17.5
$9,000	11.6	12.7	14.3
$10,000	10.2	11.0	12.1

Example: If you begin with $1,000,000 and continuously earn 8% interest, you can withdraw $6,000 per month for 24.8 years. The fund will then be depleted.

Assumes spendable dollars after income taxes in a 35% combined federal and state bracket.

HOW LONG DOES IT TAKE TO ACCUMULATE $1,000,000?

If you want to accumulate a fund of $1,000,000 in the future, the following chart shows how many years it will take.

	INTEREST RATE		
MONTHLY SAVINGS	***6%***	***8%***	***10%***
$1,000	29.5	24.5	22.2
$1,500	24.5	20.8	18.9
$2,000	20.8	17.9	16.5
$2,500	18.7	15.8	14.5
$3,000	15.8	14.5	12.8

Example: If you earn 8% per year and can save $2,000 per month, it will take 17.9 years to accumulate $1,000,000.

Views expressed herein are those of the authors only and in no way represent the SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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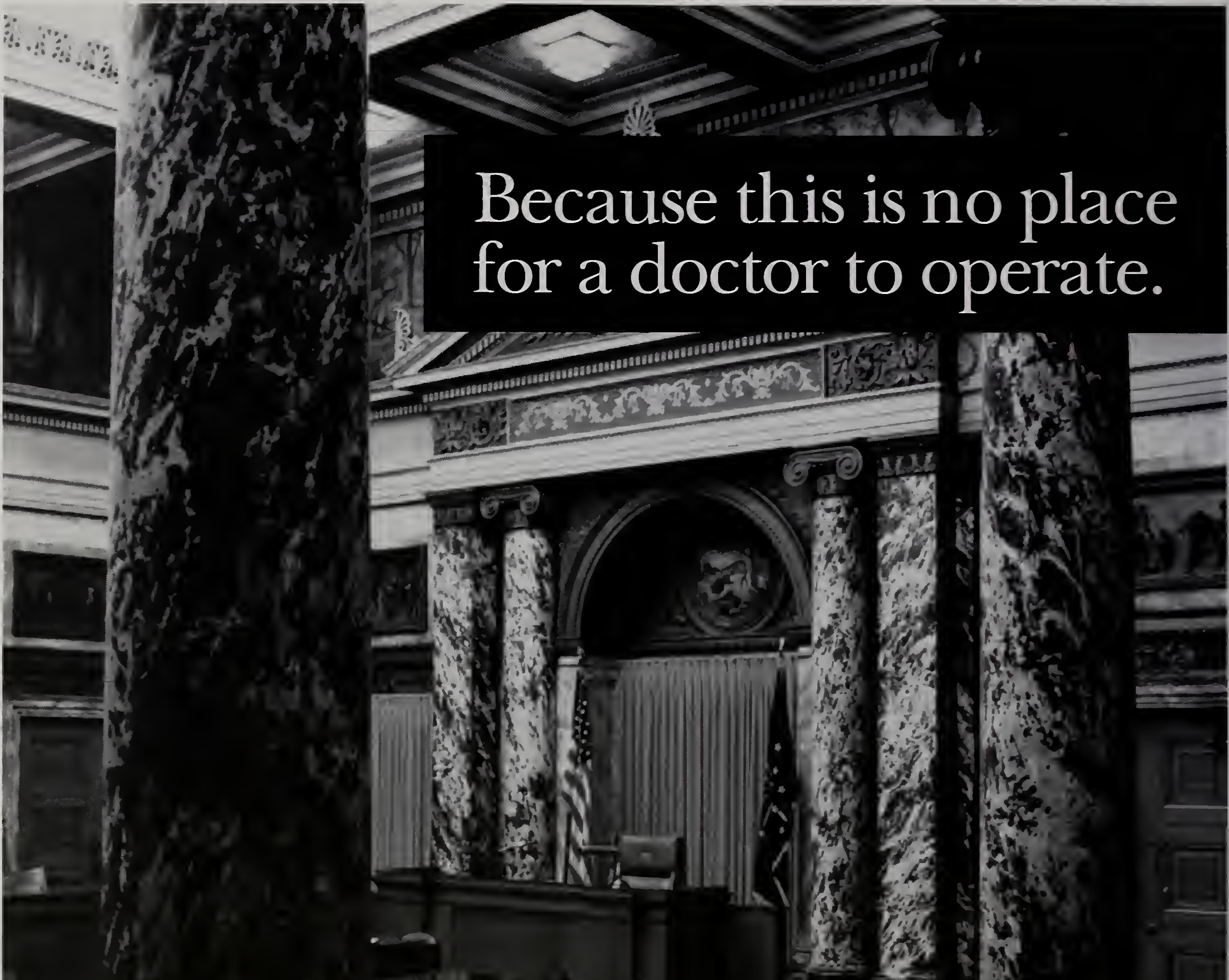

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The Journal

OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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SPECIAL ISSUE: PEDIATRIC CARDIOLOGY UPDATE FOR THE PRIMARY CARE PHYSICIAN

PART I—FRONTIER MANAGEMENT OF PEDIATRIC HEART DISEASE

GUEST EDITOR: J. PHILIP SAUL, M.D.

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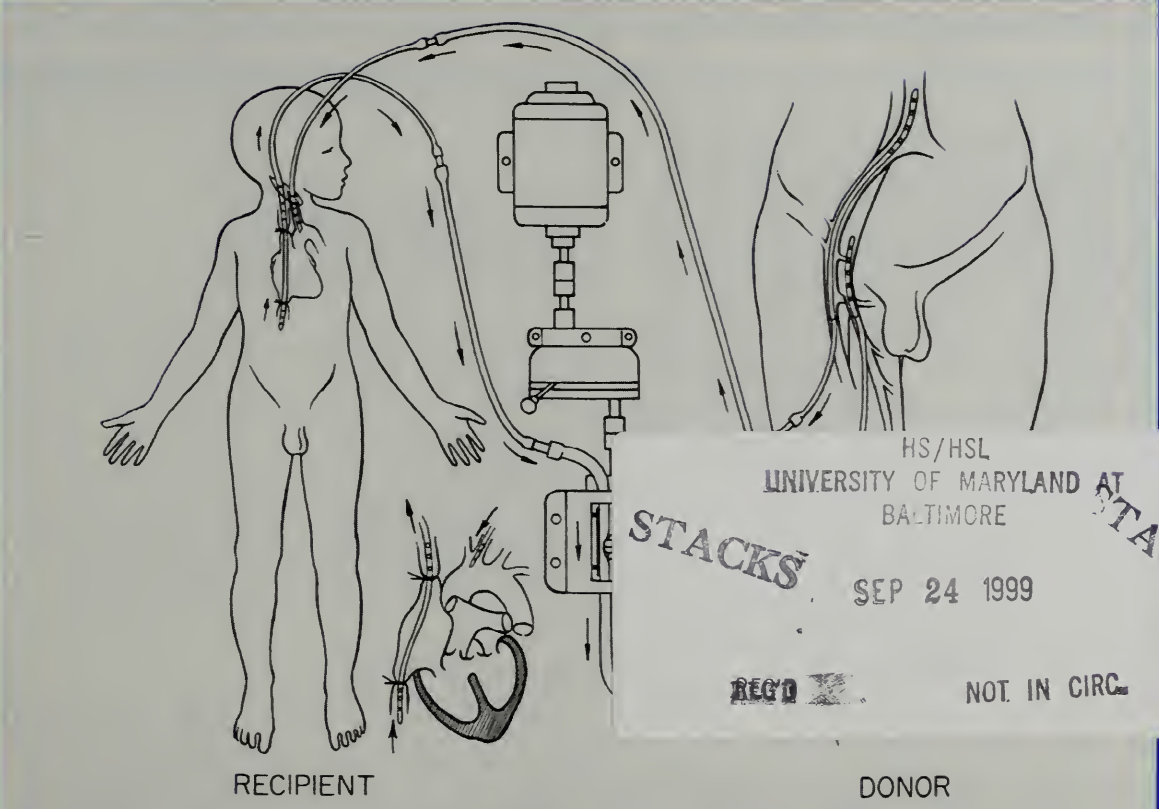

Fig. 2. Schematic diagram of the extracorporeal circulation for open-heart surgery with controlled cross circulation. The single Sigmamotor pump activated and controlled the blood flow by external compression of the tubing by multiple cam-operated metallic fingers. Thus, use of a single pump, as portrayed, aided in preventing flow imbalances between the two circuits.

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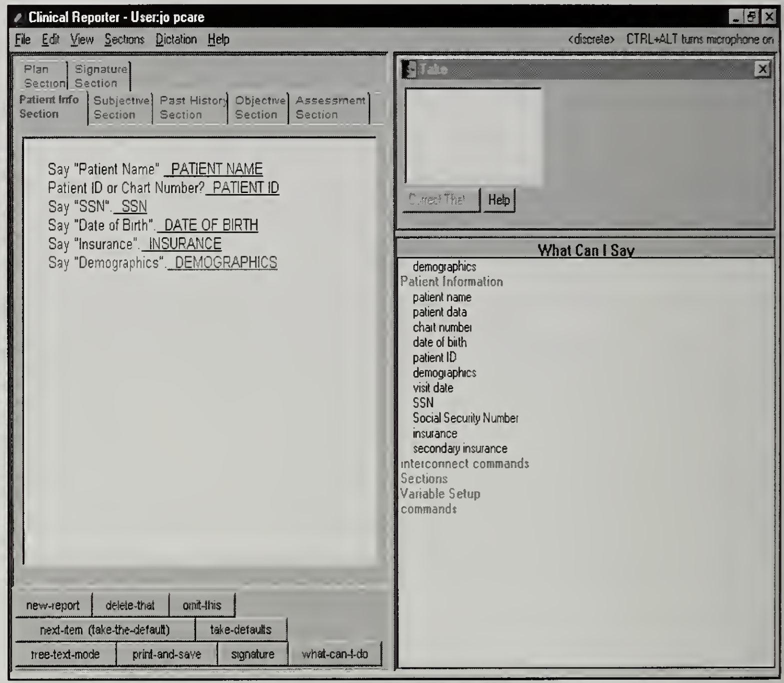

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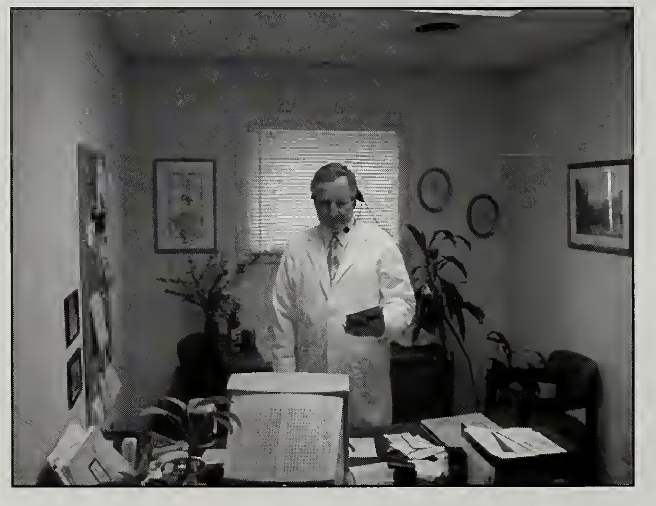

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President's Page

REACH OUT TO KEEP CHILDREN HEALTHY

Right up front let me congratulate Dr. Philip Saul, Guest Editor of the *Journal* for this and next month. He and his Co-Editors, Drs. Shuler, Horne, and Trant, have put together a smorgasbord of articles for the primary care physician. As news concerning this publication endeavor traveled through the pediatric cardiology community, more and more contributions were presented and the *Journal* split the issue into two parts to accommodate all the authors. This is a wonderful problem for Dr. Charlie Bryan, our Editor of the *Journal*, to have. I hope these two issues will be a challenge to others in South Carolina medicine to offer other contributions for publication.

"Our children, our future." How many times have you heard this and in how many different contexts has it been used? Front-page news in most of the newspapers around the state in July was that South Carolina ranks 39th among states in raising of children. A couple of years ago we were 46th! How can we improve on this 39th ranking? First, we have to solve the teen pregnancy and the unwanted pregnancy issue. Teen statistics have improved over the years, but what about the "unwanteds"? Add early prenatal care and reduction of prematurity, and the list can be enlarged to improve our 39th ranking.

Keeping children healthy is next in the natural progression of improving our rise from 39th! The fine articles you will find elsewhere in these two issues are aimed at identifying the at-risk child who might have cardiac disease. Just as early prenatal care is essential, early detection and intervention are keys to the healthy heart of a child.

Nearly every practitioner in South Carolina, regardless of specialty, can impact a child's care. It is more obvious when thinking of the roles of the family physician and the pediatrician. But you can always inquire of your patient about their family's well being and their health. Asking your patient who may be a mother, grandmother or uncle or any other relative about their family's health will send a signal from you that you are interested in more than just the blood pressure problem, or the belly pain, or the sore shoulder sitting in front of you. Your doctor-patient relationship can transcend other areas of your patient's chief complaint! Use it!

If we truly believe that our children are our future, we must pay more than lip service to cliches. We as physicians must dig just a little deeper in our hearts, yes even when tired, even when stressed, to reach out to our children and their families. They must know WE CARE.

William H. Hester, M. D.
President

The Journal™ OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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MEDICAID UPDATE

No Incentive Payments This Year
The Department of Health and Human Services (DHHS) will not make incentive payments this year. Incentive payments have previously been made with surplus funds at the end of the fiscal year. For the past several years, primary care physicians who saw a high volume of Medicaid recipients received these payments. However, because of a budget shortfall, DHHS is financially unable to make incentive payments this year.

The reason behind the shortfall is twofold. The enrollment of over 93,000 children due to the Children's Health Insurance Program (CHIP) has increased Medicaid expenditures. Initially, 75,000 children were predicted to enter the program, but a simple enrollment application and wide distribution of the application has far exceeded the original number of new enrollees. In South Carolina, over 93,000 children have been enrolled via CHIP.

The second reason for the shortfall is the rising costs for drugs. In the past year, drug expenditures have risen 38%. Direct marketing to consumers; a fourth prescription for Medicaid eligible adults, and a growth in usage has added to the costs for prescriptions. The SCMA will be working with DHHS to educate physicians on the reasons for the budget shortfall and ways it may be reversed.

DHHS hopes to obtain additional funding next year. They are aware of the burden the expansion of children's eligibility has placed on each enrolled provider. You are encouraged to participate in the following options for enhanced reimbursement:

- Physicians Enhanced Program (PEP)
- Healthy Options Program (HOP)
- Enhanced Services for AIDS Patients
- Enhanced family Planning Services
- Enhanced Obstetrical Services

The Department of Health and Environmental Control (DHEC) is available to assist in outreach and follow-up. When resources are available, DHEC is interested in establishing partnerships with physician practices to provide outreach and education for your patients and care givers in accessing appropriate, coordinated, and quality health care. Preventative and Rehabilitative Services for Primary Care Enhancement, formerly known as Family Support Services, are available through DHEC to support medical care for patients who exhibit risk factors which directly impact their medical status.

If you have any questions about these programs, please contact your Physician Services program manager at Medicaid at (803) 898-2660. Your participation in the South Carolina Medicaid Program is greatly valued and appreciated.

SOUTH CAROLINA CHAPTER AAP PRESENTS AWARDS

The South Carolina Chapter of the American Academy of Pediatrics (AAP) honored three distinguished South Carolinians during its Annual Scientific Session in Asheville, NC. The meeting, held on July 31, 1999, at the Grove Park Inn, provided the opportunity for the chapter to present the following awards:

- **Ms. Cassie Barber** - *Child Advocate of the Year* for her contributions to the health and well-being of South Carolina's children and for her achievements on behalf of these children.
- **David C. McLean, MD**, of Florence - *1999 Career Achievement Award* for his superior accomplishments in the field of medicine.
- **Mr. Jim Burroughs** - *Chapter President's Award* for his outstanding service to the chapter and its activities.

The special guest speaker was **Joel J. Alpert, MD**, President of the American Academy of Pediatrics.

RISK MANAGEMENT PROGRAM FOR NEW PHYSICIANS

The next Risk Management Program for newly licensed physicians will be held at the SCMA Headquarters on Friday, October 8, 1999. There will be two sessions offered, 9:00 a.m.-12:00 p.m. and 1:00 p.m.-4:00 p.m. To register, call Melissa Hamby at (800) 327-1021, ext. 253. This program is sponsored by the JUA/SCMA Physician Risk Management Committee for physicians entering their first or second year of practice. **There is no registration fee.**

Objectives of Program

At the end of this session, the attendee should be able to:

- Name the more common causes of medical malpractice.
- List several prevention strategies to avoid medical malpractice.
- Recognize the role of communication with patients in risk management.
- Outline the key points in record management as a role of risk management.
- Enumerate the proper steps to take when an adverse occurrence happens.
- Recognize the role of the JUA/PCF and the State Board of Medical Examiners in risk management.

Program Outline

I. Introduction - March Seabrook, MD (West Columbia, SC)

II. Overview of JUA and PCF - Sam McEwen, Manager, JUA Claims (Columbia, SC)

III. Controlling Medical Liability - March Seabrook, MD

IV. If You Need A Lawyer - Ashby W. Davis, JD (Greenville, SC), Steven A. Snyder, JD (Greenville, SC)

V. Overview of the State Board of Medical Examiners - J. D. Whitehead, Jr., MD, State Board of Medical Examiners (Columbia, SC)

VI. Hospital Risk Management - Karl Pfaehler, SC Hospital Association (Columbia, SC)

VII. Question and Answer Session

CME Credit

The South Carolina Medical Association (SCMA) designates this continuing medical education activity for up to 3 hours of Category 1 credit toward the Physician's Recognition Award for the American Medical Association. Each physician should claim only those hours of credit he or she actually spent in the educational activity.

The South Carolina Medical Association is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.

SCMA WORKSHOPS

CODING WORKSHOPS

October 26, 1999

There are two coding seminars scheduled for this day and both will be held at the Clarion Town House Hotel. The first seminar, "Coding for OB-GYN Practices," will be held from 9:00 a.m. - 12:00 p.m. The seminar will discuss all the variables for ob care, preventive care codes, and multiple surgical procedures. Registration starts at 8:30 a.m. The second seminar, "Coding Minor Office Procedures," will be held from 1:00 p.m. - 4:00 p.m. The seminar will cover the specific requirements for billing the most common minor surgical procedures at the time of the office visit.

Register by October 18, 1999.

Space in each workshop is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, ext. 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

SCMA YOUNG PHYSICIANS SECTION INTERIM MEETING

The 1999 Interim Meeting of the Young Physicians Section will be held Saturday, October 23 at Ocean Creek Plantation in Myrtle Beach. Registration information has already been mailed. For more information or to register, contact Dr. Eric Senn, YPS Chair, at (843) 272-4234 or e-mail him at Vino62@aol.com.

PHYSICIANS CARE NETWORK UPDATE

Currently, there are 8,213 participating physician locations, 898 participating ancillary locations and 97 participating hospitals. PCN has 124 contracted groups with 63,725 covered lives. We will continue to provide information as contracts are received.

NEW GROUPS:
- Dependable Drum Company; Greenville; effective 7-1-99
- Carolina Laser Technology; Gaffney; effective 7/15/99
- Life of the South; Statewide; effective 9-1-99
- Marsh/Bell Construction; Piedmont; effective 9-1-99
- USA/SES; Statewide; effective 8-1-99
- Environmental Services; Lyman; effective 7-1-99
- 2K Southern; Spartanburg; effective 8-1-99
- Sheet Metal Workers; Charleston; effective 7-1-99

TERMINATIONS:
- Cherokee Masonry; Gaffney; effective 7/1/99

RETRACTIONS:

It was previously reported that the Provident/Araz Group terminated with Physicians Care Network effective 9-1-99. This is to advise you that they have been purchased by the Ceres Group.

It was previously reported that Ohio Heritage terminated with Physicians Care Network effective 8-20-99. They remain current.

If you have questions about PCN, please contact our Provider Relations Department at (803) 771-0077 or (888) 323-9271.

SUPPORT OUR FUTURE PHYSICIANS

Season's Greetings

Although the weather is just starting to cool down, many physicians and physician groups' thoughts are turning to the holiday season and ways that they can express their thanks to those who have contributed to the growth of their practices during the past year. Some physicians will give hams, while others will give the ever-popular fruit basket or box of chocolates. Many nutritionists agree that the average American will gain seven pounds during the holiday season, and these extra pounds don't normally disappear with the beginning of the new year. The South Carolina Medical Association (SCMA) Foundation has an alternative way you can express your gratitude to others during the upcoming holiday season.

Instead of giving the gifts mentioned above, why not support our future physicians? The SCMA Foundation suggests that you make a tax-deductible contribution to support our scholarship program for medical students. In the next month, you will receive a flyer detailing our Season's Greetings program, which will allow you to support our future physicians and help increase the number of scholarships we can offer to the medical students. The Season's Greetings program allows you to give a contribution to the SCMA Foundation in someone else's name. In return, the SCMA Foundation will send a season's greetings card to that person in recognition of your gift.

Presently, the SCMA Foundation awards 14 scholarships annually to students from the Medical University of South Carolina and the University of South Carolina School of Medicine. The SCMA Foundation scholarships have made it possible for medical students to buy books they need, avoid borrowing more money at high interest rates, or repair their seven or eight-year-old cars.

Remember to look for our flyer in October about the Season's Greetings program and pledge your support. Today's medical student is tomorrow's physician who will be dedicated to the health of South Carolinians in the coming years.

MEDICARE UPDATE

Palmetto Government Benefits Administrators' direct electronic submitters should begin testing as soon as possible to ensure their computer billing applications can submit claim data containing future dates to the Palmetto GBA host. This testing is not intended as a certification mechanism for your computer billing system, but will provide you with a Receipt Listing (Error Report) that relates your system's ability to submit future dates to Palmetto GBA or indicates the types of front end edit errors incurred by your test submission. The claims data entry product provided by Palmetto GBA for electronic submitters of Medicare Part B claims, ***PACE-B***, is Year 2000 ready and will send future dates. You are ***urged to complete this testing as soon as possible!*** If your claims are being submitted to Palmetto GBA by a billing service or clearinghouse, please ensure that your vendor has performed future date testing of their billing software with all Medicare entities to which claims are being electronically submitted on your behalf. Follow the steps below to prepare for and submit your future date test.

- **Step 1** will help you determine whether or not your personal computer is Year 2K ready.
- **Step 2** provides instructions on how to future date your system in preparation for your test.
- **Step 3** gives you date parameters for the submission of a comprehensive batch of test claims, testing details and post-test instructions.

STEP 1: Assess the Y2K Readiness of Your PC (Will Your Personal Computer Work After 1/1/2000?)

1. Set the date on your PC to December 31, 1999, and the time for 23:59 p.m.
2. Turn your PC off, and reboot your machine after a five-minute wait.
3. When your machine boots up, check to assure the date and time reads January 1, 2000, at (approximately) 12:04 a.m. If the date and time on your PC does not read January 1, 2000, at (approximately) 12:04 a.m., your software may not function on and after this date.
4. Check with your hardware vendor, whether or not your PC passes this simple test, to verify the Y2K validity of your hardware.
5. To review lists of PCs that are considered Y2K compliant, you may wish to consult the website at www.nstl.com, which provides lists of Y2K compliant personal computers and Y2K compliance testing software. (This is not a Palmetto GBA website).
6. Finally, and perhaps the most important precaution to ensure Y2K compliant hardware, contact your hardware vendor or personal computer manufacturer to verify the compliance of your personal computer and peripheral hardware components.

STEP 2: Future Date Your PC (Simulate the Years Ahead)

1. At the DOS prompt (C:\>), type **DATE** and press **<ENTER>.**
2. Your system will display the current date and prompt you to **<Enter new date (mm-dd-yy)>.**
3. Set your system date for a date prior to 1-31-2001.
4. Remember to include the *dashes* when you set your system date ahead.

STEP 3: Prepare Test Batches and Send Your Test

1. Prepare a test batch of approximately 20 claims.
2. The Palmetto GBA test system is set up to accept future dates through 1-31-2001. To ensure a comprehensive future date test, we suggest that you include test claims for the dates of 12-31-99 (tests the century rollover); 2-28-2000, 2-29-2000 and 3-1-2000 (tests leap year date logic); 12-31-2000 and 1-1-2001 (tests new year rollover); and various dates during 2000.
3. Enter "TEST" in the "TEST/PRODUCTION" indicator field in your software and in the BATCH ID of your $$ADD card. The National Standard Format location for this indicator is record AA0, field 21, positions 254-257; your software vendor will identify the location of this field within your software package for you.
4. Submit your test file to Palmetto GBA by 1:00 p.m. Eastern Time or by 8:00 p.m. Eastern Time.
5. Retrieve your electronic Receipt Listing (Error Report) approximately one hour following your 1:00 or 8:00 test transmission, and review your errors.
6. Notify your software vendor of any date-oriented errors found on your Receipt Listing.

Palmetto GBA is not a computer hardware vendor. They do not warrant or represent any statements concerning computer hardware, nor are they responsible for or assume any liability for data loss or technical difficulties which may result from future dating. Palmetto GBA strongly urges all users to consult with the manufacturer of their computer hardware prior to future date testing.

The Palmetto GBA Electronic Media Claims/Electronic Data Interchange Help Line at (803) 788-9751 will address questions regarding testing.

The Journal
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SPECIAL ISSUE: PEDIATRIC CARDIOLOGY UPDATE FOR THE PRIMARY CARE PHYSICIAN

THE CHILDREN'S HEART PROGRAM OF SOUTH CAROLINA: A MODEL PROGRAM FOR DELIVERY OF PEDIATRIC CARDIAC SERVICES IN A MID-SIZED STATE

J. PHILIP SAUL, M. D.*
C. OSBORNE SHULER, M. D.
BENJAMIN S. HORNE, M.D.
CHARLES A. TRANT, JR., M.D.

This manuscript will describe a system of coordinated pediatric cardiac care known as The Children's Heart Program of South Carolina (CHP-SC), which dramatically enhances the quality of service delivery, and is totally unique to South Carolina. The mission of the CHP-SC is *to provide the best possible cardiac care to the children of South Carolina by creating a model health care delivery system.* To implement that mission, the specific steps already taken (closed circles) or in process (open circles) are:

- provide coordinated care to all South Carolinians with pediatric or congenital heart disease through a network of pediatric cardiologists at four regional centers (Figure 1)
- maintain local outreach services to smaller communities throughout the state
- reduce or eliminate overlapping pediatric cardiac services within the state
- focus catheterization and surgical services at one highly sub-specialized center
- provide opportunities for coordinated clinical research
- ○ link the regional centers to each other and all level 2 and 3 neonatal ICUs in the state through a state-of-the-art telemedicine network
- ○ form a framework for further integration of pediatric cardiac services in South Carolina.

Although a number of factors, including cost reduction and outcomes enhancement, contribute to the desire to develop such a coordinated system, there are also many factors opposing it, primarily the perceived need of some centers to be all things to all people by offering services in even the most subspecialized areas. Unfortunately, a few studies have already demonstrated that when such an ap-

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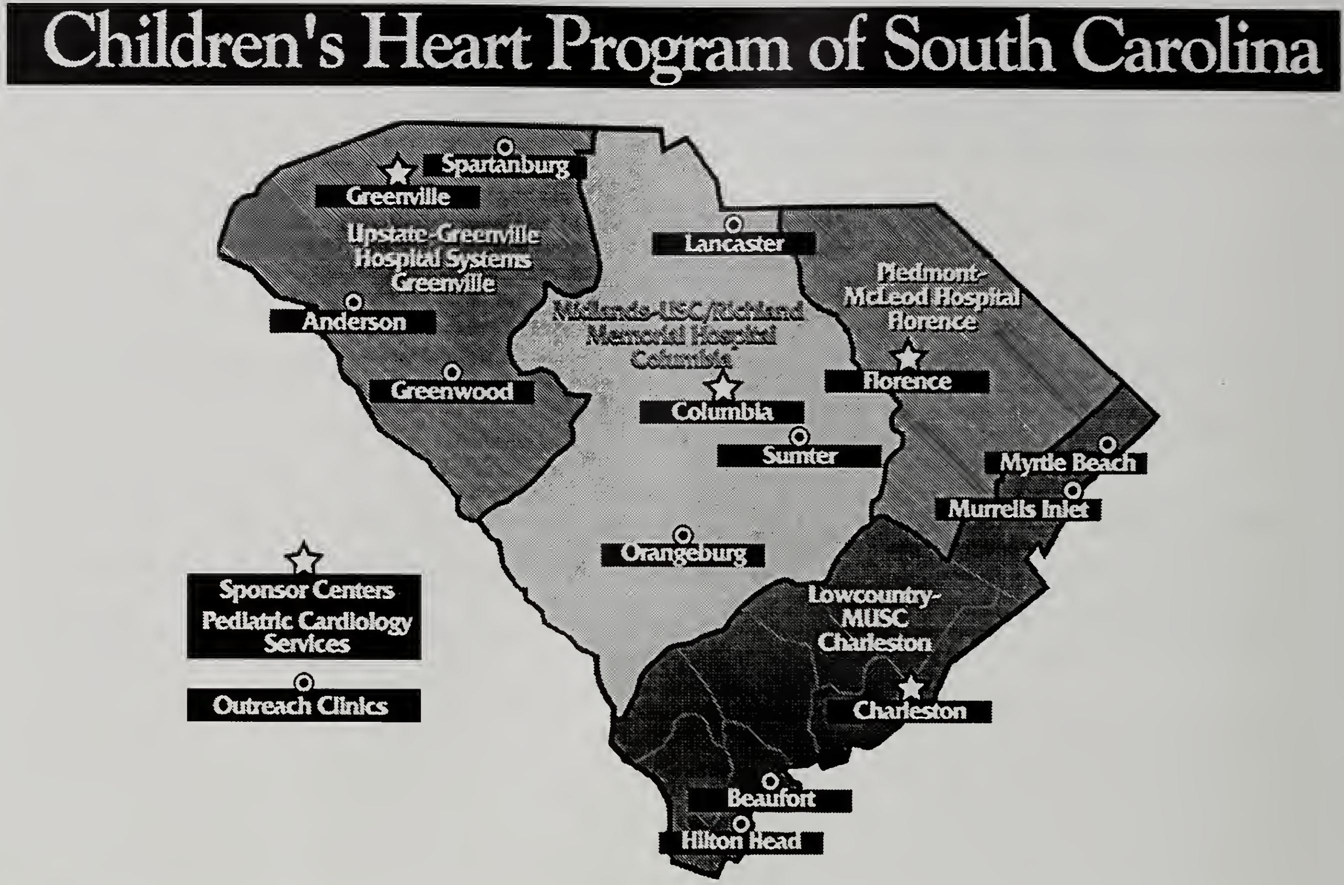
Children's Heart Program of South Carolina
Spartanburg
Greenville
Upstate-Greenville Hospital Systems Greenville
Anderson
Greenwood
Lancaster
Midlands-USC/Richland Memorial Hospital Columbia
Columbia
Sumter
Orangeburg
Piedmont-McLeod Hospital Florence
Florence
Myrtle Beach
Murrells Inlet
Lowcountry-MUSC Charleston
Charleston
Beaufort
Hilton Head
Sponsor Centers Pediatric Cardiology Services
Outreach Clinics

Figure 1. Four sponsor centers (stars), their regions, and their outreach sites (circles) for the Children's Heart Program of South Carolina.

proach is used for pediatric cardiac surgical services, the result is often poorer outcomes.[1,2] South Carolina is fortunate to have a group of pediatric cardiologists who realize that in a properly constructed system, what is best for the patients is also best for them.

DEFINITION OF COORDINATED CARE

Primary and secondary cardiac evaluations and follow-up are offered by each of the four regional centers in the geographic areas shown in Figure 1. Although most tertiary services and all quaternary ones, such as catheterization and surgery, are performed in one center (MUSC), the patient and their family's perception of being cared for "in network" is maintained through three layers of interaction. First, the four centers truly operate as one group, with each center's stationery bearing the names of all participants. Thus, the family is presented with a simple transfer to another branch of the same care network. Second, cardiologists from all four centers have staff appointments at MUSC, routinely catheterize their own patients at MUSC, and are or will participate in all clinical and educational conferences over the telemedicine network. Finally, with few exceptions, follow-up and postoperative care is always performed at the regional center geographically closest to the patient. To support this last component and maintain local care, MUSC cardiologists provide subspecialized outreach services at each regional center in such areas as pacing/arrhythmia management, adult congenital heart disease, and highly complex case management. Further, MUSC subspecialists are available in all areas for consultation seven days a week, 24-hours a day.

NECESSARY COMPONENTS TO MAINTAIN SUCH A PROGRAM

Outcomes. First and foremost, excellent outcomes drive a voluntary coordination of services like that described here. Many of the following articles detail how MUSC currently provides such outcomes for the full range of interventional services, including surgery (see Bradley), interventional catheterization (see Radtke), transplant (see Wiles, October issue) and electrophysiology (see Saul). As many of the authors detail that providing these stellar outcomes is possible only through expertise and coordination of local services such as diagnostic echocardiography, dedicated pediatric cardiac anesthesia, and dedicated pediatric cardiac intensive care. Although these factors can never guarantee excellent results, subspecialization of services is clearly the breeding ground of excellence in a small field like pediatric cardiology. Fortunate for the children of South Carolina, these factors have come together at MUSC to provide outcomes that are as good as or better than anywhere in the world.

Special Programs. The second component for maintaining a network is providing special programs which could not be supported in four separate programs individually. The classic example in cardiology is transplant services which require extensive ancillary support and are rarely done in large numbers at even the largest centers. Regionalization of these services has worked well for the CHP-SC (see Wiles, October issue). However, less obvious programs can also have a high impact. The CHP-SC has taken an encompassing approach by developing coordinated efforts in fetal cardiology (see Shirali, October issue), and Adult Congenital Cardiology (see Taylor, October issue). Management, which begins with the fetus, optimizes care by insuring that neonates who require surgery in the first few days of life receive appropriate preoperative management and, if possible, are delivered in the center where surgery will be performed. The phenomenal success of surgical interventions over the last 40 years has also amplified the importance of the care of the adult with congenital heart disease, as fully half of our patients will be adults by the end of the next decade. Finally, electrophysiology services are another area where dedicated physicians and support staff could not be maintained in smaller individual centers but can be in a coordinated regional system.

Education and Research. Again, this last component is strongly facilitated by pooling resources from a number of centers. For instance, MUSC has begun a program in the genetics of congenital heart disease with the goal of identifying the genes which predispose to cardiac defects or arrhythmias, beginning with the study of families who have more than one member with a congenital heart problem. Identifying these families and obtaining an adequate number to yield meaningful results would be nearly impossible without the participation of the four regional centers. The telemedicine system will offer the ability to cross-fertilize knowledge and information, both as it relates to specific patient care issues and contemporary didactic topics. Finally, maintenance of one center with the critical mass to support basic researchers, such as those in the Cardiac Developmental Biology Center at MUSC, and a fellowship program help push back the frontiers of the field and assure the future of pediatric cardiology.

To summarize, the four regional centers which make up the CHP-SC are proud to be able to offer this unique system of pediatric cardiac care to the people of South Carolina. The articles contained in the September and October special issues of this *Journal* will first detail state-of-the-art management in our field (current issue), and then review the management of cardiovascular problems seen in a primary care practice (October issue). Excellence in both of these aspects of care makes up our combined services and helps assure the continued success of the program.

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1. Jenkins KJ, Newburger JW, Lock JE, Davis RB, Coffman GA, Iezzoni LI: In-hospital mortality for surgical repair of congenital heart defects: Preliminary observations of variation by hospital caseload. Pediatrics 1995;95:323-330.
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HISTORY OF CONGENITAL HEART SURGERY IN SOUTH CAROLINA

FRED A. CRAWFORD, JR., M. D.*

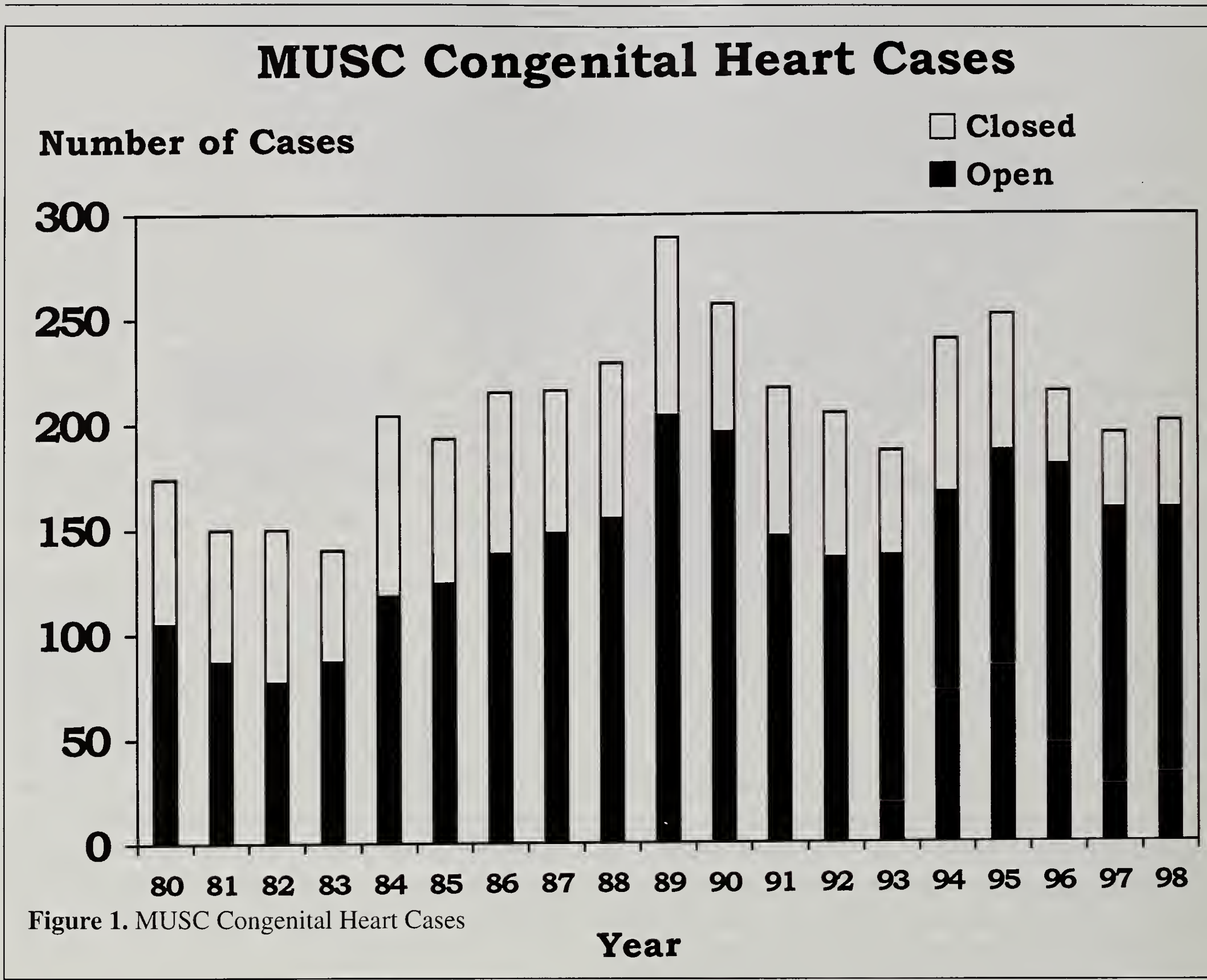

Figure 1. MUSC Congenital Heart Cases

Surgery for congenital heart disease began in 1938 when Robert Gross in Boston first successfully ligated a patent ductus arteriosus (PDA). This event was followed by coarctation repair later that year, and by development of the Blalock-Taussig shunt for cyanotic heart disease in 1944. Correction of intracardiac defects awaited the development of hypothermia (Lewis and Swann), cross circulation (Lillehei-cover), and the heart lung machine (Gibbon) in the early 1950s.

Simultaneously, cardiac surgery was developing in South Carolina led by one of the first successful mitral valvotomies performed by Horace Smithy in 1948.[1] Boone in 1950 described the creation of South Carolina Heart Association specialty clinics in Charleston, Columbia, Greenville, and Spartanburg as well as two $3,000 fellowships "for making intensive training in heart diseases available to more physicians in South Carolina."[2] Ashmore and Parker in 1957 reported the first six patients undergoing cardiopulmonary bypass in

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Table 1. Congenital Heart Cases 1980 - 1998

	Number	% of Total
VSD	480	12.2
ASD	453	11.5
PDA	398	10.1
Shunts	372	9.5
Coarctation	303	7.7
AV canal	272	6.9
TOF	264	6.7
Valve surgery	208	5.3
Fontan	203	5.2
Arrhythmia	149	3.8
Hypoplastic left heart	120	3.1
Transposition	106	2.7
Rsx for subvalvar AS	83	2.1
PA band	76	1.9
Anom pulm ven drainage	74	1.9
Truncus arteriosus	41	1.0
Atrial septectomy	22	0.6
Heart transplant	10	0.3
Other (open)	233	5.9
Other (closed)	62	1.6
TOTAL	**3,929**	**100.0**

ASD=atrial septal defect; AV=atrioventricular; PA=pulmonary artery; PDA=patent ductus arteriosus; TOF=tetralogy of Fallot; VSD=ventricular septal defect.

South Carolina including four ventricular septal defects (VSDs), one tetralogy and one aortic valve procedure.[3] The modern era of the management of congenital heart disease in South Carolina can be traced to the appointment of Arno Hohn as the first full-time Chief of Pediatric Cardiology at MUSC in 1967. Surgeons with significant interest in congenital heart disease have included Parker, Arrants, Lee, Sade, Crawford, and Bradley. While MUSC remains the center for congenital heart surgery in South Carolina, pediatric cardiologists linked to the MUSC Children's Heart Program are now based in Columbia, Greenville and Florence as well as Charleston. Table 1 lists the different congenital heart procedures done at MUSC since 1980.

Initially, most congenital heart operations were "closed" and included procedures such as PDA ligation, coarctation repair, pulmonary artery banding for palliation of left to right shunts, Blalock-Taussig shunts for palliation of cyanotic lesions and pulmonary valvotomy for pulmonary valve stenosis. A few "open" procedures were also carried out including atrial septal defect (ASD) and VSD repair. Figure 1 documents the changes that have occurred relative to open versus closed procedures over the past two decades at MUSC. Closed and palliative procedures have steadily decreased and have been replaced by more complex "open" repairs at earlier ages. PDA ligation and pulmonary valvotomy are rare surgical procedures at MUSC today as these defects are most often managed by interventional catheter-based techniques in the cath lab. Palliative procedures such as pulmonary artery banding for L→R shunts and Blalock-Taussig shunts for cyanotic lesions are increasingly uncommon as these defects are now repaired primarily at an early age. Even ASD repair is becoming an uncommon operation as catheter devices are now available for satisfactory closure of many of these defects. Other surgical procedures have had brief popularity only to then virtually disappear. For example, in the late 1980s, more arrhythmia surgery in infants and small children was performed at MUSC than at any other institution, but this disappeared overnight when catheter ablation techniques proved to be equally successful while avoiding the trauma of surgery.

Today, early definitive repair of congenital heart defects which previously underwent initial palliation such as VSD, complete atrioventricular (AV) canal, tetralogy of Fallot, and transposition of the great vessels has become routine. Refinement of previous procedures using newer techniques and improved myocardial protection have resulted in success rates for complete AV canal repair comparable to that previously available for ASD and VSD. New, more physiologic repairs have been developed for other defects such as the arterial switch procedure for transposition of great vessels instead of the previous atrial switch techniques. The understanding that single ventricle repairs (Fontan) provide excellent long-term results has made correction of such defects as tricuspid atresia and hypoplastic left heart syndrome routine.

Accordingly, most operative procedures for congenital heart disease performed at MUSC have become steadily more complex. The fact that results with these procedures at MUSC are comparable to those obtained in the very best institutions in the world (see next article by Bradley) is a tribute to a dedicated team that includes pediatric cardiologists, anesthesiologists, intensivists, perfusionists, nurses, technicians, and congenital heart surgeons—all of whom have been assembled to care for these children.

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NEONATAL REPAIR AND DEALING WITH A SINGLE VENTRICLE

SCOTT M. BRADLEY, M.D.*

The last decade has seen major changes in the surgical approach to congenital heart disease. Congenital cardiac defects may be broadly classified into two groups: biventricular and univentricular. Biventricular defects are those in which there are two pumping chambers or ventricles, one (usually the right ventricle) which can be used to pump blue blood to the lungs, and the other (usually the left) which can be used to pump red blood to the body. Univentricular defects are those in which there is only one ventricle which can be used as a functional pumping chamber. The surgical approach to biventricular defects is quite different from that to univentricular defects. A decision whether to pursue a biventricular or a univentricular approach must be made early in a patient's life, usually within the first month after birth. This decision requires accurate anatomic information, which is typically provided by echocardiography. Cardiac catheterization and MRI can provide additional diagnostic information in select cases.

The surgical approach to biventricular defects has evolved away from palliation, to early complete repair. Examples of common biventricular defects which have witnessed this evolution are transposition of the great arteries, tetralogy of Fallot, interrupted aortic arch, truncus arteriosus, common atrioventricular canal, and ventricular septal defect. The traditional approach to these defects was palliation in infancy, followed by complete repair at a later time. Palliation of defects with "too much" pulmonary blood flow, including interrupted aortic arch, truncus arteriosus, common atrioventricular canal, and ventricular septal defect, usually involved placement of a pulmonary artery band. Palliation of defects with "too little" pulmonary blood flow, such as tetralogy of Fallot, was achieved by placement of a systemic-to-pulmonary shunt. The advantage of postponing complete repair to a later time was that the risk of a more complex operation was avoided in infants (under one year old), and in particular in neonates (under one month old). However, postponing complete repair also had disadvantages. Patients were exposed to the deleterious side effects of their defects, including cyanosis, and cardiac pressure and volume overload, for the months or years preceding eventual complete repair. The palliative operations themselves also had complications, such as pulmonary artery distortion, which could be difficult or impossible to correct at the time of complete repair.

The current surgical approach to biventricular defects is now complete repair at the time of presentation. This approach typically means the performance of an open heart operation requiring cardiopulmonary bypass in an infant, or neonate. That such an approach is now routine is a testimony to dramatic advances in multiple areas. Advances in surgical approach include new operations (such as the arterial switch operation for transposition, and direct aortic arch repair for interrupted aortic arch), improved materials, and the concentration of operations in the hands of surgeons specifically trained in neonatal heart surgery. Advances in diagnosis include the increased accuracy of echocardiography and the resulting limitation of cardiac catheterization in neonates to intervention (such as for balloon valvuloplasty or balloon atrial septostomy), or more complex diagnostic issues. Advances in intraoperative care include the expertise of anesthesiologists versed in the management of neonates with congenital heart defects, and both improved equipment and new approaches to conducting cardiopulmonary bypass in small patients. A critical advance in perioperative care has been the concentration of both pre- and postoperative care in a dedicated pediatric cardiac intensive care unit staffed by full-time cardiac

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Table 1
Surgical Procedures and Mortality

	MUSC July 1995-June 1999		MUSC July 1998-June 1999		PCCC*
Procedure	Number	Mortality (%)	Number	Mortality (%)	Mortality (%)
Norwood for HLHS	43	18.6	16	12.5	48.4
Arterial Switch	31	3.2	8	0.0	13.3
Fontan Procedure	48	4.2	10	0.0	8.6
Hemi-Fontan	51	2.0	10	0.0	5.2
Complete AV Canal	35	2.8	12	0.0	8.0
Tetralogy of Fallot	41	4.9	19	5.3	5.0
ASD/VSD-isolated	175	0.0	54	0.0	1.5
All procedures#	952	3.0	252	1.6	6.7

ASD-atrial septal defect; AV-atrioventricular; VSD-ventricular septal defect

* Pediatric Cardiac Care Consortium (average of 53 centers, including MUSC) 7/95-12/97.
# Procedures performed for palliation/repair of congenital heart defects. Does not include ICU and cath lab procedures (delayed sternal closure, etc.)

intensivists, nurses, and respiratory therapists familiar with the daily management of critically ill neonates including ventilatory support, the use of nitric oxide for pulmonary hypertension, and mechanical cardiopulmonary support (extracorporeal membrane oxygenation, or ECMO, and ventricular assist devices). Consistent success in open heart operations in neonates and infants is possible only by a close coordination of accurate diagnosis, surgery, anesthetic and perioperative care.

Perhaps the most dramatic example of success in early complete repair for biventricular defects is the arterial switch operation for transposition of the great arteries. Earlier approaches to correction were the "atrial switch" operations (Mustard, or Senning procedure), which left the right ventricle permanently connected to the aorta as the systemic pumping chamber. While atrial switches achieved good short-term success, they had significant incidences of atrial arrhythmias and ventricular failure over the long-term. The arterial switch operation involves "untransposing" the great arteries, which leaves the left ventricle connected to the aorta, as in a normal anatomic arrangement. The operation is typically carried out in the first week of life and avoids the long-term problems of the atrial switch operations. The operative risk of the arterial switch operation in institutions equipped for neonatal cardiac surgery is now under five percent and has been three percent in our institution over the last four years (Table 1).

Tetralogy of Fallot remains the most common cardiac cause of cyanosis. Complete repair involves closure of a ventricular septal defect and relief of pulmonary stenosis (right ventricular outflow tract obstruction). Our approach to patients with tetralogy of Fallot is complete repair at the first appearance of symptoms. These include either baseline cyanosis, with oxygen saturations under 90 percent, or a single hypercyanotic tetralogy spell. Complete repair is undertaken at any age, including within the first month of life. Asymptomatic patients may undergo elective complete repair at six to eight months of age. Complete repair of tetralogy of Fallot has carried a low operative risk in our hands over the last four years (Table 1). Interrupted aortic arch and truncus arteriosus are further examples of defects which now

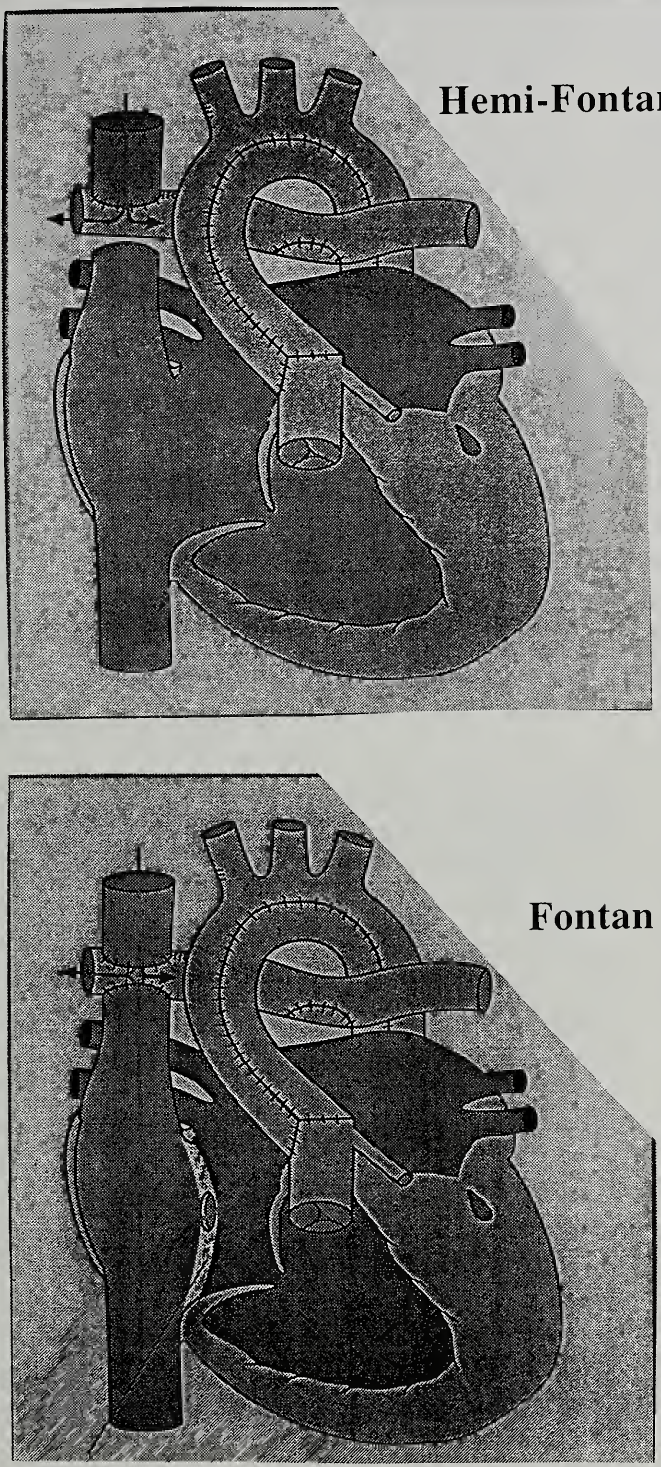

Figure 1. Schematic of hemi-Fontan (above) and Fontan (below) procedures.

undergo complete biventricular repair in the neonatal period. Complete atrioventricular canal and ventricular septal defect are typically repaired by six to eight months, also with excellent results (Table 1).

Univentricular congenital heart defects are not amenable to complete repair. Examples of such univentricular defects are hypoplastic left heart syndrome (HLHS), tricuspid atresia, pulmonary atresia with intact ventricular septum, and double inlet left ventricle. Patients with univentricular defects are candidates for either heart transplantation, or staged surgical palliation. Given the scarcity of heart donors for children, as well as the long-term side effects of anti-rejection drugs, it has been our policy to pursue staged palliation. This approach consists of a series of operations aimed at making the circulation as normal as is possible. The ultimate goal of staged surgical palliation is a Fontan operation. After a Fontan operation, venous return from the body (blue blood) flows passively to the lungs, without being pumped by a cardiac chamber. Blood returning from the lungs (red blood) is then pumped by the patient's single ventricle to the body (Figure 1). The Fontan operation achieves normal oxygen saturations and normal cardiac workload (ventricular volume load) in patients with only one functional ventricle.

Staged surgical palliation typically includes three operations. The first occurs during the neonatal period and varies in its details according to the patient's exact anatomy. An important goal of the neonatal operation is to provide adequate, but not excessive, pulmonary blood flow. This goal is usually met by placement of a small, Goretex tube graft (3.5-4 mm in diameter) between the innominate artery and the pulmonary arteries ("modified Blalock-Taussig shunt"). After this first operation, patients have both lower than normal oxygen saturations (generally 75-85 percent), and higher than normal cardiac workload (ventricular volume overload). The second, or hemi-Fontan, operation occurs at six to eight months of age and is fairly standardized. The hemi-Fontan involves removal of the shunt placed at the first operation and connection of the superior vena cava directly to the pulmonary arteries (Figure 1). After the hemi-Fontan operation, patients' oxygen saturations remain 75-85 percent, but their cardiac workload is normalized. The third, or Fontan operation, occurs at two to three years of age. The Fontan involves connection of the inferior vena cava directly to the pulmonary arteries (Figure 1). After a Fontan operation, patients' oxygen saturations are normalized (95-100 percent). The operative risk of the hemi-Fontan and Fontan operations over the last four years at our institution have been two percent and four percent respectively (Table 1).

Hypoplastic left heart syndrome is at once the most common and the most challenging univentricular congenital heart defect. It includes a spectrum of heart anomalies characterized by underdevelopment of the structures of the left side of the heart. The first (neonatal) step of staged surgical palliation for hypoplastic left heart syndrome is called the Norwood procedure. This procedure includes not only the placement of the modified Blalock-Taussig shunt common to other neonatal univentricular palliations, but also reconstruction of the entire aortic arch and ascending aorta so that the right ventricle is connected to pump blood to the reconstructed aorta and the body. The complexity of the Norwood procedure contributes to its high risk. Patients undergoing the procedure truly test all aspects of an institution's pre-, intra-, and postoperative management. Overall hospital mortality for the procedure remains between 40 percent and 60 percent nationally. Hospital mortality for all Norwood procedures over the last four years at our institution has been 18 percent (Table 1). Operative risk for first stage palliation of univentricular defects other than hypoplastic left heart syndrome is significantly lower. Fortunately, patients who survive the Norwood procedure also have much lower risk during their subsequent hemi-Fontan and Fontan operations (Table 1).

PERCUTANEOUS CATHETER INTERVENTIONS TO REPLACE SURGERY: HOW FAR HAVE WE COME, HOW FAR CAN WE GO?

WOLFGANG A. K. RADTKE, M.D.*

Over the past 15 years therapeutic catheter interventions for congenital heart disease have matured into the standard treatment for many lesions.[1] Evolution of catheters, devices and technique, as well as better patient selection, have increased success rates and reduced complications. Progress is driven by new applications for existing devices and procedures, but also by device innovation despite the focus of commercial development budgets on the treatment of atherosclerotic disease. The following paragraphs review current state-of-the-art and future developments for the major categories of catheter interventions.

TREATMENT OF PULMONARY ARTERY STENOSIS, AORTIC COARCTATION AND OTHER VASCULAR OBSTRUCTIONS

At MUSC, the success rate of balloon angioplasty (commonly defined as >50 percent diameter increase) was 86 percent over the past six years with an overall mean diameter increase of 78±7 percent. Minor complications occured in 10.2 percent (Table 1). Introduction of vascular stents has further increased the scope and success of percutaneous treatment of vascular obstructions. Stent implantation allows reconstruction to a normal vessel diameter. Therefore, success is now defined as elimination of anatomic stenosis and not just 50 percent diameter increase. At MUSC, stent implantation resulted in elimination of stenosis in 91 percent over the past six years with complications in only eight percent (Table 1). With these results, balloon angioplasty and stent implantation have replaced surgery for pulmonary artery stenosis. Limitations remain for very young patients because of the size and poor maneuverability of the relatively rigid stents needed for future redilation to adult diameter. Resorbable stents with appropriate mechanical stability will probably overcome size constraints and eliminate the need for re-dilation to account for somatic growth. Balloon angioplasty has also replaced surgery for recurrent coarctation after surgical repair, and typically results in elimination of pressure gradients. Stent implantation may supplement balloon angioplasty to achieve complete elimination of anatomical stenosis both for native and recurrent coarctation. Stent implantation is particularly effective in milder stenosis, does not require over-extension of the aortic wall and also makes hypoplastic aortic arch segments amenable to transcatheter reconstruction. However, follow-up information is still limited. Assuming favorable long term results, balloon angioplasty and stent implantation will likely replace surgery for aortic coarctation for patients older than ten years, and with the development of resorbable stents, probably also for younger patients.

Balloon angioplasty with stent implantation is also the primary treatment for systemic venous stenoses typically resulting in elimination of anatomic stenosis. Transcatheter intervention can even be used to recannalize completely obliterated venous connections or create venous connections de-novo by placement of standard stents or stent grafts after initial wire passage. Further development of this technique may allow, for example, transcatheter creation of a superior vena cava to right pulmonary artery anastomosis to secure pulmonary blood flow in complex cyanotic heart disease.

TREATMENT OF VALVAR STENOSIS

Based on consistently good results over the past ten years, balloon valvotomy has replaced surgery for the treatment of congenital pulmonary and aortic valve stenosis, and rheumatic mitral stenosis

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Table 1: Success and complications of catheter interventions at MUSC compared to the pertinent literature

	Medical University of S.C. June 93 – Nov 98			*Literature*	
	Procedures n	Success %	Complications %	*Success %*	*Complications[4,5] %*
Balloon angioplasty	147	**86** [a]	10.2	*80* [2,3]	*12.0*
Stent implantation	63	**91** [b]	8.0	*78* [6,7]	*11.6*
Balloon valvotomy	94	**88** [c]	8.5	*79* [8,9]	*17.1*
PDA coil occlusion	152	**99** [d]	6.3	*98* [13]	*8.5*
Coil occlusion of abnormal vessels	64	**92** [d]	3.0	*70* [12]	*9.2*
ASD occlusion	45	**98** [d]	6.7	-	-
Miscellaneous	23	**87**	13.0	-	*13.7*

ASD – atrial septal defect; PDA – patent ductus arteriosus.

Notes: Interventions grouped by type across lesions, and to match available literature:
a. >50% increase in stenosis diameter; *b.* no residual stenosis; *c.* aortic (<35 mmHg residual gradient), pulmonary (<25 mmHg residual gradient), mitral (>1 cm^2/m^2 value area); *d.* complete closure.

for all age groups with non-calcific disease. Balloon dilatation typically achieves effective splitting of the fused commissures with excellent reduction in pressure gradients similar to typical surgical results. At MUSC, success rate was 88 percent (commonly defined as residual gradient ≤35 mmHg for aortic and ≤25 mmHg for pulmonary valvuloplasty) with a complication rate of 8.5 percent (Table 1). The mean residual pressure gradient was 23±3 mmHg. Hemodynamically significant valve regurgitation was induced in five percent. Medium term follow-up over eight to ten years showed that re-stenosis is very rare.[11] Valvar insufficiency appears to determine the long term course.

TREATMENT OF VALVAR ATRESIA

Pulmonary valve atresia can be effectively treated with catheter interventions if right ventricular size is relatively normal.[12] During cardiac catheterization the atretic valve is perforated with radiofrequency or laser energy to allow passage of a guide wire into the main pulmonary artery over which balloon valvuloplasty is then performed in typical fashion. Ductus patency may have to be maintained with prostaglandin for up to six weeks to allow right ventricular compliance to normalize. Occasionally, a systemico-pulmonary shunt may need to be performed surgically or by stenting the ductus arteriosus. After right ventricular growth has been accomplished, the shunt or the stented ductus is closed with transcatheter coil or device occlusion.

CLOSURE OF ABNORMAL VASCULAR COMMUNICATIONS

Closure of pathological vascular communications, e.g. coronary fistulas, or systemic-pulmonary collaterals is routinely accomplished with catheter interventions using coils or other occluder devices. Complete occlusion was achieved in 92 percent of such procedures at MUSC with only three percent minor complications (Table 1) and included e.g. closure of a large coronary artery fistula in a ten-day-old newborn. Transcatheter occlusion of the patent ductus arteriosus using coils has essentially replaced surgery. The procedure is same-day in-and-out and achieved complete occlusion in 98 percent of 158 such procedures performed at MUSC in patients aged two months to 58 years with very few minor complications (Table 1). Gene therapy may result in a different catheter directed approach in the future: local gene transfer to the ductal wall would induce appropriate intimal proliferation and/or media hypertrophy to achieve ductal closure without implanting occlusive devices.

CLOSURE OF SEPTAL DEFECTS

Current FDA trials are demonstrating excellent safety and efficacy of transcatheter device occlusion of atrial septal defects, e.g. using the Amplatzer Occluder (Figure 1). This double, disc-shaped Nitinol wire mesh filled with polyester fabric patches is placed in the defect through 7F to 10F delivery sheaths. At our institution, all attempted implantations have been successful and resulted in complete occlusion in 93 percent of the 60 patients aged two to 75 years. Hospital stay is less than 24 hours. Device occlusion is likely to replace surgery for most secundum atrial septal defects. Devices with steerable anchoring may extend the indications. Transcatheter closure of muscular ventricular septal defects has already been shown to be feasible, safe and effective.[15] Various devices will be avail-

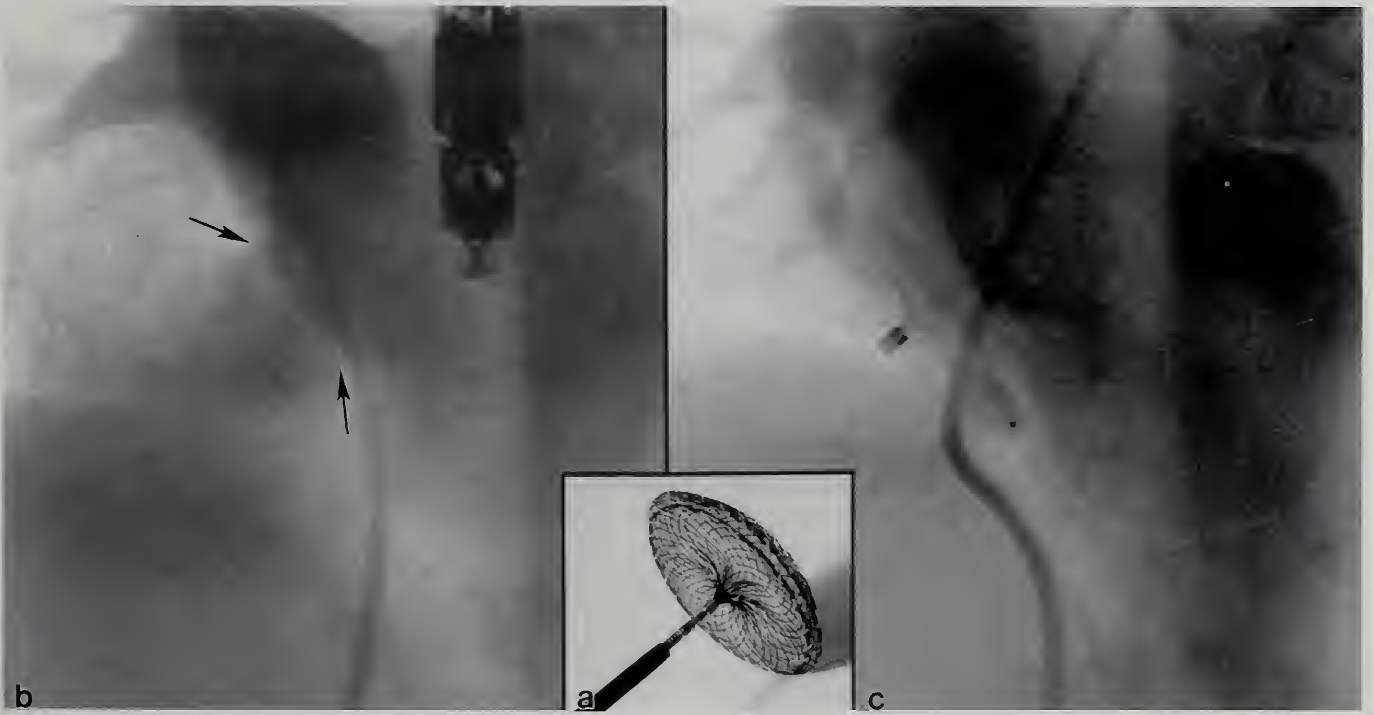

Figure 1. Amplatzer occluder attached to the delivery wire and outside the delivery sheath (a). Contrast injection into the right upper pulmonary vein shows a 16 mm secundum ASD (arrows) in 35 cranial/35 LAO projection in an eight year old girl with a Qp/Qs ratio of 2.6 (b). The levophase after pulmonary artery contrast injection opacifies the left atrium and shows excellent position of the 20 mm Amplatzer Occluder which completely closes the defect (c).

able for transcatheter occlusion of mid-muscular, apical and residual ventricular septal defects with enough distance from the cardiac valves. Perimembranous ventricular septal defects remain a challenge because of their proximity to aortic and tricuspid valve. However, specialized occlusion devices are under development. In parallel, developments are underway to use catheter directed gene therapy to induce local tissue proliferation around the defect to achieve gradual closure.

FUTURE DEVELOPMENTS IN CATHETER DIRECTED THERAPY

The scope of congenital heart lesions primarily treated with catheter interventions will likely further increase. Early animal experiments have demonstrated that transcatheter placement of bioprosthetic valves mounted on expandable stents is feasible. It is likely that further technical development will make this a viable procedure e.g. for patients with severe pulmonary valve insufficiency after tetralogy of Fallot repair. A partial or total cavopulmonary anastomosis connecting the systemic venous return to the right pulmonary artery may eventually be accomplished by catheter methods. Very often surgical and catheter interventions are combined for the most effective treatment of complex congenital heart disease to accomplish the best physiologic result in order to give the patients a normal life as unimpaired, insurable and productive members of society.

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A REVOLUTION IN THE MANAGEMENT OF ARRHYTHMIAS: ABLATION AND DEVICES

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SESHADRI BALAJI, M.D.

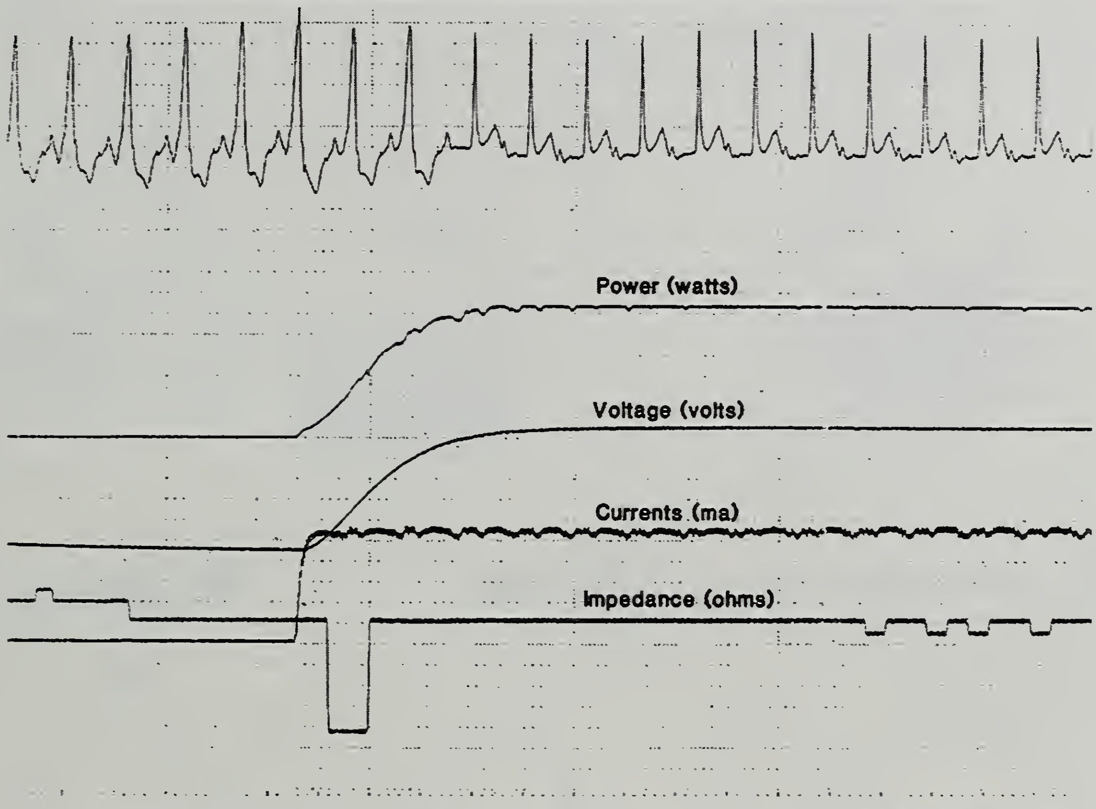

Figure 1. ECG from first child to undergo RF ablation for WPW (1990). Less than one second after RF energy is applied, the delta wave is eliminated in this five-year-old boy with WPW, who had failed multiple medications.

Einthoven's invention of the clinical electrocardiogram (ECG) in 1907 marked the beginning of an era in arrhythmia management which was dominated by the development of diagnostic acumen. This era may have reached its peak in 1932, when, based on surface ECG data alone, Wolferth and Wood[1] correctly hypothesized that the structural abnormality underlying the Wolff-Parkinson-White (WPW) syndrome was an accessory atrioventricular (AV) connection, or pathway (AP). However, it was another 37 years before Sealy and coworkers[2] first reported on the cure of a tachyarrhythmia by surgically dividing a right-sided AP in a patient with WPW. During the next 20 years, clinicians had three options for treating patients with tachyarrhythmias: medical therapy, open-chest surgery, or none. Unfortunately, because of the ineffectiveness, side effects and potential for malignant pro-arrythmia of many drugs, and the risk of surgery, "none" was often as good as the other two choices. However, in the late 1980s and early 1990s, the options began to dramatically change with the introduction of the internal cardioverter-defibrillator (ICD) into common clinical practice, and the development of radiofrequency catheter ablation (RFCA) as a safe and effective

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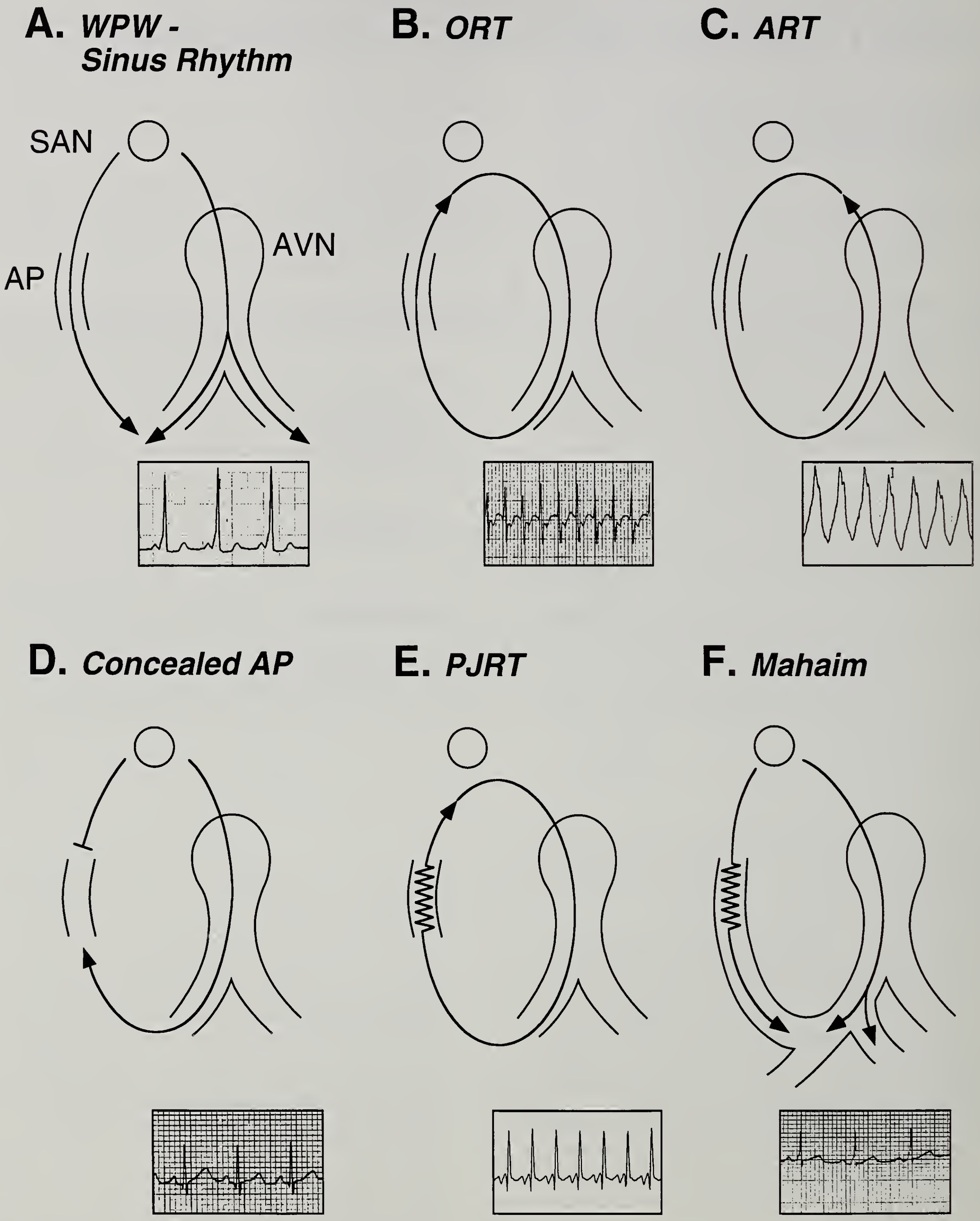
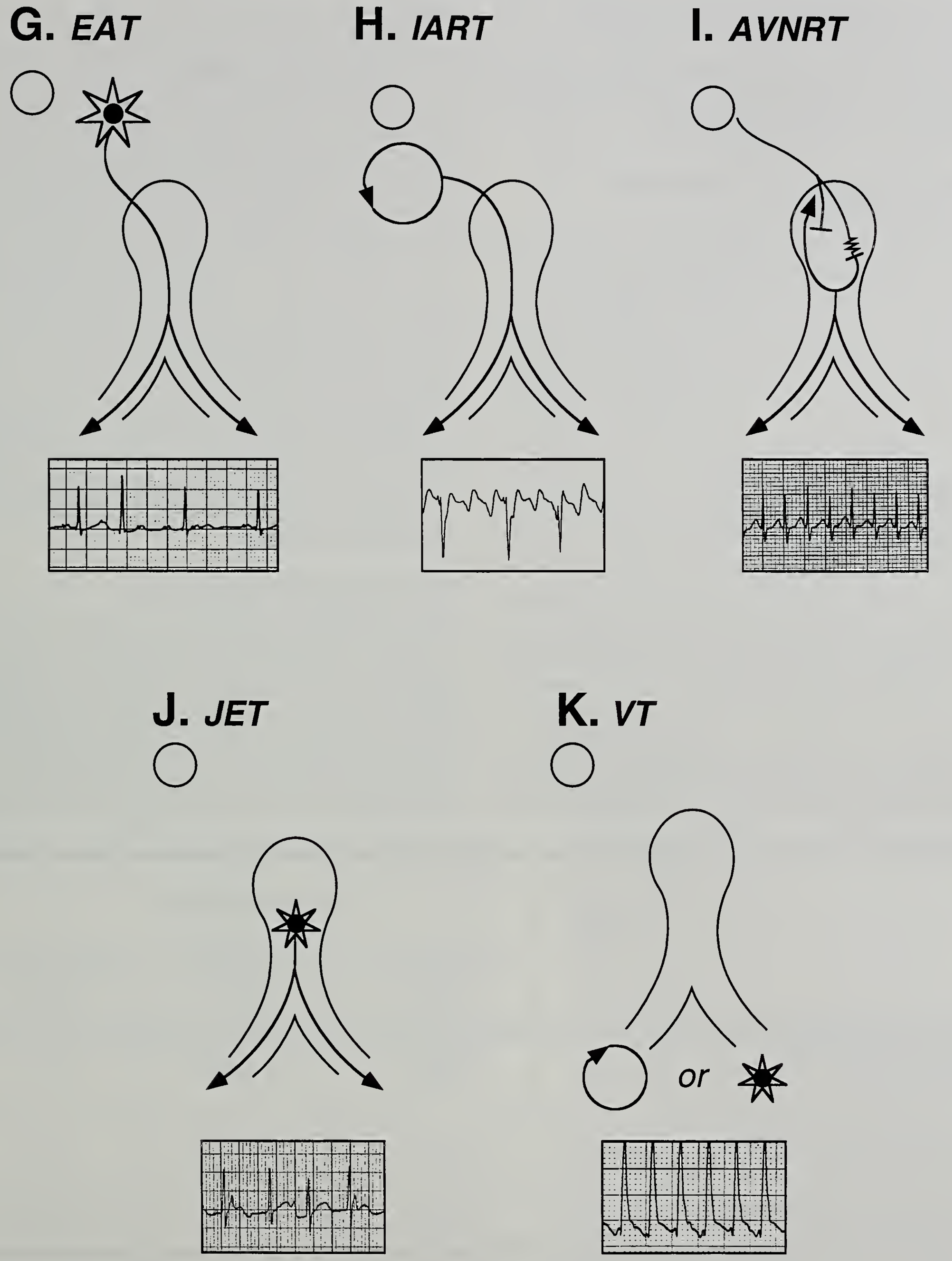


Figure 2 (pgs. 344-345): Mechanisms of tachycardia treatable with ablation. SAN - sino-atrial node. AVN - atrioventricular node. AP - accessory pathway. ORT - orthodromic reciprocating tachycardia. ART - antidromic reciprocating tachycardia. PJRT - permanent junctional reciprocating tachycardia. EAT - ectopic atrial tachycardia. IART - intra-atrial reentry tachycardia. JET - junctional ectopic tachycardia. VT - ventricular tachycardia.


G. EAT
H. IART
I. AVNRT
J. JET
K. VT
or

means for eliminating arrhythmia substrates. These two developments heralded an explosion in the understanding and management of most arrhythmias in adults which is both reflected and amplified in the field of pediatrics.

RADIOFREQUENCY CATHETER ABLATION (RFCA)

The first reported use of RFCA in a child was in 1990 to cure junctional ectopic tachycardia in a ten-month-old infant;[3] however, this report was soon followed by its use to cure WPW in a five-year-old boy with a left-sided AP by the first author of this manuscript JPS (Figure 1).[4] The procedure has been so effective and safe,[5] that as many as 100,000 such procedures are now performed annually, and the Catheter Ablation Registry from the Pediatric Electrophysiology Society has collected more than 6,000 cases in children alone.[6] Further, indications for RFCA have now expanded and include all of the arrhythmia mechanisms shown in Figure 2, with success rates ranging from about 70 percent for ventricular tachycardia (VT) to 100 percent for many forms of supraventricular tachycardia (SVT) (Figure 2, Table 1).[5,6]

The RFCA procedure itself begins with a standard diagnostic electrophysiological evaluation, typically performed with three or four intracardiac catheters. A process called mapping is then used to localize the small area of myocardium responsible for maintaining the arrhythmia (e.g., AP insertion site, cells with enhanced automaticity, zone of slow conduction in an atrial or ventricular reentry site) before attempting ablation. When the most appropriate site is identified precisely, the mapping catheter is used to deliver RF energy at that site using a power level just high enough to heat the adjacent myocardium and catheter tip to a temperature between 50 and 70°C. The procedure is typically performed with a temperature controlled RF generator, and each RF application creates a lesion with a diameter between zero and six mm. The procedure is usually modified for the smallest children to assure that only very small lesions are created and we have performed successful RFCAs in patients as small as 1.8 kg without any complications, when absolutely necessary.

IMPLANTABLE DEVICES

These devices come in two varieties: anti-bradycardia, or pacemakers, and anti-tachycardia, which today are only marketed in the form of automatic ICDs and come with bradycardia and tachycardia pacing features as well as the ability to deliver low and high energy DC shocks. Fortunately, routine pacemakers for bradycardia have been available

	Proc N	Success Rate		
		MUSC %	Boston[5] %	Registry[6] %
Supraventricular Tachycardia	**53**	**100**	**93 (100^)**	**83**
Atrial Flutter (reentry)	**25**	**96**	**74***	**67**
Ventricular Tachycardia	**17**	**76**	**64**	**38**
Total	**95**			

Table 1. Acute success for catheter ablation procedures performed at MUSC since arrival of first author JPS, January 1998 - June 1999. Comparison to References #5 (Children's Hospital, Boston, n=373, March 1990 - February 1995) and #6 (Pediatric Catheter Ablation Registry, n=705, January 1991 - September1992). ^ - most recent 75 procedures. * - no recent data available, success improved in last two years by personal communication Triedman.

in a small enough package for pacing even the smallest infants for many years. However, they must be implanted using an epicardial lead with device placement in the abdomen under the rectus muscle, rather than a transvenous endocardial lead with device placement in the shoulder over or under the pectus muscle. The primary indication for pacing in pediatrics is complete heart block, either congenital, or acquired during a surgical repair of congenital heart disease.

It was only in 1979 that Mirowski[7] first reported successful automatic internal defibrillation in humans, but since then, the ICD has had a dramatic impact on the management of and prognosis of adult patients at risk for sudden cardiac death, particularly for patients with good ventricular function, who are unlikely to die of non-arrhythmic causes. Less data exist in pediatric patients. However, in a multicenter report of ICD use in 125 patients under 20 years of age, mortality was confined to the patients with abnormal ventricular function (9/46),[8] results very similar to those in adults. Indications for implantation included aborted sudden cardiac death (76 percent), drug refractory VT (ten percent), unexplained syncope and induced arrhythmias (ten percent), and structural heart disease plus a family history of sudden death (four percent). A range of diagnoses underlay these indications, but the largest groups were patients with long QT syndrome (LQTS), repaired congenital heart disease, and idiopathic arrhythmias, consistent with our own experience at MUSC. Appropriate ICD discharges occurred in 76 percent of the 60 patients followed for more than 24 months. Survival free from sudden cardiac death was 90 percent at five years for the entire group. Until very recently, ICDs were not small enough for infants, but were used in children and adolescents.

One case we managed recently highlights just how far ablation and device technology have come. A 4.8 kg, four-month old, known to have frequent isolated ventricular premature beats, a ventricular septal defect, valvar pulmonary stenosis, and mild left ventricular outflow tract obstruction presented with syncope and was found to have nonsustained runs of polymorphic VT. While being observed as an inpatient, he began to have sustained runs of VT, requiring both CPR and DC cardioversion. After an invasive electrophysiological study demonstrated that much of the ectopy originated in the right ventricular outflow tract (RVOT), he underwent surgical repair of his structural defects, resection of part of the RVOT, and implantation of a 39cc ICD using an epicardial patch and sub-rectal abdominal device implantation. He is the smallest child to ever receive an ICD. During the postoperative period, he had intermittently incessant episodes of a second VT, apparently from the left ventricle. After the ICD detected 650 episodes of VT and delivered 350 paced cardioversions and 72 DC shocks, he was taken back to the catheterization lab where we were able to successfully ablate the remaining VT focus, but only by ablating all AV conduction, leaving the patient with heart block. Fortunately, the ICD had bradycardia pacing at a rate of 100 beats/minute. Although this child's course was anything but smooth, the case does demonstrate that almost regardless of size, when it comes to the technical aspects of complex arrhythmia management, the future is here. The challenges that remains are to understand the actual etiology of cases like the one above and to treat the cause rather than the symptoms.

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INHALED NITRIC OXIDE FOR PULMONARY HYPERTENSION IN PATIENTS WITH AND WITHOUT CONGENITAL HEART DISEASE: JUST SAY NO!

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JANET M. SIMSIC, M.D.

In the lung, as elsewhere in the body, nitric oxide (NO) is an endogenous mediator of vascular tone. Formed from L-arginine and molecular oxygen in a reaction catalyzed by NO synthase at the endothelial cell surface, NO causes vasodilation through a cyclic guanosine monophosphate dependent pathway. Since NO exists as a gas, it can be delivered by inhalation to the alveoli and then diffused to blood vessels which lie in close proximity to the ventilated lung. Because of its rapid inactivation by hemoglobin, inhaled NO may achieve selective pulmonary vasodilation when pulmonary vasoconstriction exists. Inhaled NO reduces pulmonary artery pressure in a number of diseases without the unwanted effect of systemic hypotension. This is especially dramatic in children with cardiovascular disorders and postoperative patients with pulmonary hypertensive crises. Additionally, inhaled NO reduces intrapulmonary shunt fraction and may improve oxygenation in selected patients with severe pulmonary parenchymal disease and hypoxemia.

USE AFTER CARDIAC SURGERY

Pulmonary hypertensive crises are dramatic events, which threaten the life of an infant despite an excellent surgical repair. Infants with total anomalous pulmonary venous connection (TAPVC) are particularly at risk. When pulmonary venous return is obstructed preoperatively, pulmonary hypertension is severe and demands urgent surgical relief. In a study of infants presenting with isolated TAPVC, patients with postoperative pulmonary hypertension inhaled NO at 80 parts per million during a 15-minute trial. A mean percentage decrease of 42 percent in pulmonary vascular resistance and 32 percent in mean pulmonary artery pressure was demonstrated. There was no significant change in heart rate, systemic blood pressure or systemic vascular resistance.[1] Its effective use has been demonstrated following heart transplantation and following surgical repair of ventricular septal defects, atrioventricular septal defects, transposition of the great arteries, and other structural heart defects.[2,3]

USE BEFORE CARDIAC SURGERY

Pulmonary hypertension is often a crucial factor in determining the timing or type of surgery in congenital heart disease lesions. An increased or fixed elevation in pulmonary pressures may deny patients the chance of corrective surgery, leaving them susceptible to development of progressive obliterative pulmonary vascular disease and severely reduced life expectancy. Recently, combination testing with nitric oxide and oxygen has been shown to provide maximal pulmonary vasodilation in patients with a reactive pulmonary vascular bed in a specific, safe, and expeditious fashion during cardiac catheterization.[4] The combination of inhaled agents distinguishes patients with significant pulmonary vasoreactivity who might not be identified and offered corrective surgery using either agent separately.

USE AS A DIAGNOSTIC TOOL

Differentiation between pulmonary vasoconstriction and anatomic obstruction to pulmonary blood flow may be difficult, especially in neonates. A definitive diagnosis may require invasive and potentially dangerous investigation of the circulation. In one study, nine of 15 newborns with pulmonary hypertension following cardiac surgery responded to NO with a significant reduction in mean pulmonary artery pressure. In each of those who did not respond, subsequent investigation revealed ana-

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tomical obstruction to pulmonary blood flow. Thus, failure of the postoperative newborn with pulmonary hypertension to respond to NO successfully discriminated anatomical obstruction to pulmonary blood flow from pulmonary vasoconstriction.[5] More recently, inhaled NO has been used in babies with severe neonatal Ebstein's to accurately identify those with true pulmonary atresia, quickly determining which patients will require high risk surgery.[6]

USE IN PATIENTS WITHOUT CONGENITAL HEART DISEASE

Inhaled NO has proved beneficial in a number of disorders with acute respiratory failure. Prospective randomized trials of NO have clearly shown improved oxygenation and reduced need for extracorporeal membrane oxygenation (ECMO) in babies presenting with persistent hypertension of the newborn (PPHN),[7] and is now a mainstay in many tertiary care neonatal intensive care units. Effectiveness has also been demonstrated in other models of acute respiratory failure in children. One such example is illustrated in a case report of two patients with sickle cell disease who developed acute chest syndrome (ACS) with respiratory failure and pulmonary hypertension despite aggressive medical therapy including positive pressure ventilation and exchange transfusion.[8] Inhaled nitric oxide resulted in rapid and significant pulmonary vasodilation and improved oxygenation. Prolonged therapy with inhaled nitric oxide was safely performed and may have been an important factor in the successful weaning and extubation of both patients. Inhaled nitric oxide may therefore be beneficial in ACS by dilating the pulmonary vascular bed, reducing afterload on the right ventricle, redistributing pulmonary blood flow to better ventilated areas of lung, and potentially reducing sickling in the lung. Proper large prospective trials will need to be undertaken to further elucidate the importance of this novel therapy in ACS.

There are also potential benefits of chronic, outpatient administration of NO to facilitate growth and beneficial remodeling of the abnormal pulmonary vasculature in unusual forms of idiopathic pulmonary hypertension identified in early infancy. Four infants less than four months old with severe, unexplained pulmonary hypertension (biopsy proven and presumed to be fatal) were treated with a 25 day regimen of inhaled nitric oxide and the angiogenesis factor heparin. At the end of the treatment period they had nearly normal pulmonary artery pressures without recurrence of pulmonary hypertension in three of four during two years of follow-up.[9] While no conclusion can be drawn from such limited experience, it has prompted reevaluation of our notion about presumed irreversibility of "primary" pulmonary hypertension early in life.

SAFETY CONSIDERATIONS

Nitric oxide has not yet been approved by the FDA and therefore remains an investigational drug, restricted to study by authorized investigators. Although there is little doubt that NO reduces pulmonary artery pressure and improves oxygenation in many patients with reversible components to their pulmonary vascular and lung disease, improper or inadequate delivery and monitoring can carry considerable patient risk. Detailed descriptions of the safe delivery and monitoring of the gas have been reported.[10] Future clinical research in inhaled nitric oxide will need to focus on the mechanism of failure of nonresponders, the indications and safety of chronic administration, more efficient delivery and monitoring systems, and the development of protocols to demonstrate improvement in patient outcomes, which will lead to its approval as a noninvestigational drug.

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THE CRITICAL ROLE OF SPECIALIZED ANESTHESIA FOR PEDIATRIC CARDIAC SURGERY AND ANCILLARY PROCEDURES

B. HUGH DORMAN, M.D., Ph.D.*
MARK PINOSKY, M.D.

Anesthetic management of the pediatric patient with congenital heart disease requiring cardiovascular surgery or a non-cardiac surgical procedure can be extremely challenging. Since the pediatric population has a broad spectrum of cardiac lesions, diverse physiologic compensatory mechanisms based on the specific cardiac disease, and changing management needs at different ages, optimal anesthetic care requires an individual with specialized training in both cardiac and pediatric anesthesiology. The pediatric cardiac anesthesiologist must possess a working knowledge of the anatomy and pathophysiology of each congenital cardiac abnormality, in addition to the ability to effectively manage the very different physiologic requirements of a wide spectrum of patient ages and associated problems caused by extracardiac defects and various congenital syndromes. Moreover, there has been a recent trend towards complete cardiac repairs on younger patients rather than palliative procedures, which adds additional complexity to anesthetic management. Therefore, at the Medical University of South Carolina (MUSC) we have a specialized pediatric cardiac anesthesia team committed to the care of children with congenital heart defects. For pediatric patients requiring cardiac surgery utilizing cardiopulmonary bypass, a pediatric cardiac anesthesiologist is always assigned to the case (Table 1). The anesthesiologist is involved in the preoperative preparation and assessment of the patient and is primarily responsible for the welfare and stability of the patient from the initial presentation in the preoperative holding area until arrival in the pediatric cardiac Intensive Care Unit. Obviously, the intraoperative management of these patients is also shared by the surgeon, and the pediatric cardiologist may provide insight in an assessment of the adequacy of surgical repair. In addition to open-heart surgery requiring cardiopulmonary bypass, there are other cardiac surgical procedures in which a member of the pediatric cardiac anesthesia team should always be present and is at MUSC (Table 1). The placement of epicardial pacing wires, return to the operating room for bleeding after cardiothoracic surgery, and pacemaker lead extractions all have the potential for major impacts on cardiopulmonary status and, therefore, are covered by a pediatric cardiac anesthesiologist. Furthermore, ligation of patent ductus arteriosus and repair of coarctation of the aorta and vascular rings require specialized anesthetic management.

The congenital heart disease patient for non-cardiac surgical procedures presents unique challenges for the anesthesiologist. These patients fall into two categories. Procedures required prior to cardiac surgery and those performed after the patient has undergone cardiac surgery. The first includes those performed by the general pediatric surgeons such as exploratory laparotomy for necrotizing enterocolitis and central line placement, dental restoration by pediatric dentistry and cardiac catheterization by pediatric cardiology. The pediatric cardiac anesthesiologist is most familiar with the multitude of anatomic defects responsible for congenital heart disease and the cardiovascular impairment that can be primarily traced to four distinct etiologies including hypoxemia, pulmonary disease, cardiac failure, or dysrhythmias. The pediatric cardiac anesthesiologist plays an active role in determining the choice of anesthesia and monitoring based upon the type of surgery to be performed and the degree of cardiovascular and pulmonary compromise associated with the congenital heart defect. This evaluation begins in the preoperative

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Table 1. Pediatric Cardiac Surgical Procedures Performed Exclusively by Pediatric Cardiac Anesthesiologists

1. All cardiac cases requiring cardiopulmonary bypass.
2. Systemic-pulmonary shunt placement and pulmonary artery banding.
3. Repair of coarctation of the aorta.
4. Thoracotomy for cardiac surgery.
5. Ligation of patent ductus arteriosus.
6. Repair of vascular rings.
7. Defibrillator placement.
8. Surgery for bleeding after cardiothoracic surgery.
9. Placement of epicardial pacing wires.
10. Pacemaker lead extractions.
11. Pericardial window procedures.

period with consultation from the pediatric cardiologist and surgeon, as well as the patient's family, to ensure that the patient is in an optimal physiologic state when he or she presents for surgery. Of particular concern is the patient's intravascular volume status, hematocrit, cardiovascular parameters and assurance of proper endocarditis prophylaxis. Intraoperative management and monitoring is dictated by the relevant physiology and planned surgical procedure. Induction and maintenance of anesthesia as well as choice of anesthetic technique must balance the needs of the patient with the complexity of the surgical procedure. Postoperative care of the patient requires careful management as the hemodynamics of the patient may have changed during the operation. This again includes monitoring intravascular volume changes, changes in pulmonary compliance and manifestations of cardiac decompensation. Our ongoing relationship with the surgical services and pediatric cardiology has assured that our patients transition safely into the postoperative phase.

The second category of patients are those with corrected heart defects that present for noncardiac surgery. These patients present a different set of challenges for the anesthesiologist. First, the diversity of anatomic and physiologic changes defies easy categorization, thus making it difficult to apply general rules of management. Second, cardiac and pulmonary reserve may be severely limited. Third, there is little objective data in the literature to formulate an anesthetic plan. As diagnosis and treatment of congenital heart disease improves, we are seeing more patients reach reproductive age. The cardiovascular changes associated with pregnancy coupled with the changes from their congenital heart disease presents unique challenges for the anesthesiologist and mandates specialized management.

In summary, perioperative anesthetic management of the pediatric patient with congenital heart disease requiring cardiovascular surgery or a noncardiac surgical procedure is a challenging task that requires a working knowledge of the anatomy and pathophysiology of each congenital cardiac abnormality. In addition, ongoing open communication and cooperation with the pediatric cardiology and surgical teams are vital to the success of any program.

GENETIC BASIS OF CARDIOVASCULAR DISEASE IN THE YOUNG: PAST, PRESENT, AND FUTURE

D. WOODROW BENSON, M.D., Ph.D.*
TIM C. McQUINN, M.D.

STATE OF THE ART IN MANAGEMENT OF CARDIOVASCULAR DISEASE IN THE YOUNG

As reviewed elsewhere in this issue, the state of the art in the management of congenital cardiac malformations is exemplified by extraordinary diagnostic precision and exceptionally low morbidity and mortality of definitive surgical therapy of transposition of the great arteries in infants and transcatheter closure of atrial septal defect (ASD) in children. But the state of the art is not perfect. As summarized in "A Report of the Task Force on Children and Youth,"[1] every year in the USA, 32,000 individuals are born with cardiovascular malformations; approximately 20 percent die during the first year of life. Another 30,000 young people develop a disturbance of cardiac rhythm or conduction. In addition, the life expectancy of another 40,000 young people is shortened by other forms of cardiovascular disease. It is becoming more apparent that in spite of the success in diagnosis and treatment, very little is known about the causes of cardiovascular disease in the young; improved understanding of the causes will permit insight into the pathophysiologic basis of disease and allow definition of disease risk—two critical elements for disease prevention.

EVALUATING THE GENETIC CAUSE OF CARDIOVASCULAR DISEASE

Four interrelated strategies are being employed to study the cause of cardiovascular disease in the young: studies of normal development, evaluation of spontaneous or induced models of cardiac maldevelopment, evaluation of targeted mutations, and determination of the genetic cause of familial heart disease in affected individuals. This last approach is the subject of this review.[2]

Cardiac malformations contribute greatly to cardiovascular disease in the young; they constitute a major portion of clinically significant birth defects with a definition dependent estimated incidence of five to 50 per 1000 live births. There is a long-standing clinical view that most congenital heart defects occur as isolated cases and, based on studies of recurrence and transmission risks, a hypothesis of multifactorial etiology has reigned for several decades. However, cardiovascular disease is clearly not purely multifactorial because examples of classic mendelian transmission have been reported.[3] These observations suggest there is some genetic component to congenital heart disease but not a single gene defect in all families; analyses that combine defects that may result from recessive, dominant and nongenetic causes may appear to have a multifactorial cause.

GENETIC STUDIES AND IMPLICATIONS FOR MECHANISMS OF CONGENITAL HEART DEFECTS

Traditionally, congenital heart defects have been classified by anatomic characteristics, e.g. defects of the atrial septum, defects of the ventricular septum, etc. While this taxonomy has been useful for many facets of diagnosis and treatment, it has not provided insight into the cause of cardiac malformations. As a result of the anatomic perspective, studies of cardiac development have emphasized embryologic pathways of regional cardiac development, e.g. atrioventricular canal defects.

The recent report of cardiac disease resulting from heterozygous mutations in the transcription factor, *Nkx2-5*, illustrates another dimension of the problem.[4] Among four families with multigenerational congenital heart disease, all genotype positive individuals developed atrioventricular block during the first four decades of life and 85 percent had ASD. However, some family members had a

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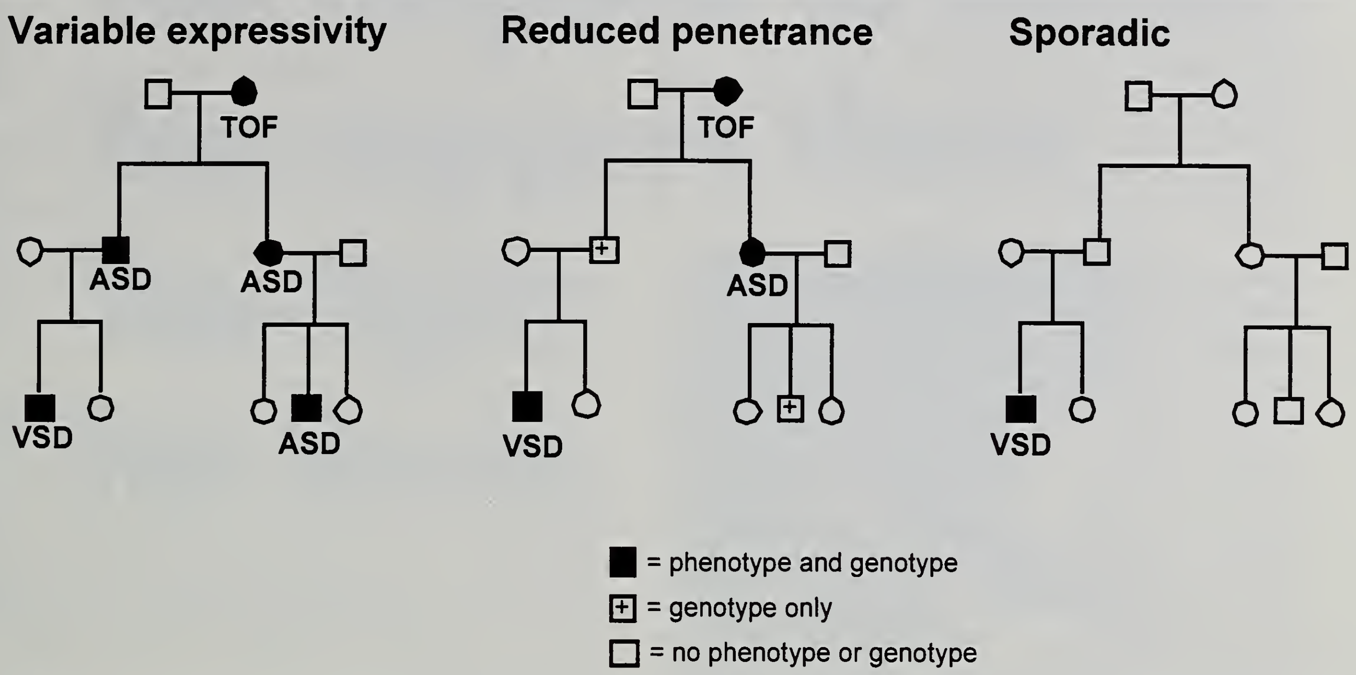

Figure 1. Pedigrees illustrating forms of inheritance of cardiovascular disease in the young. Square symbols denote males and round symbols denote females. As illustrated in the left panel, a grandmother with tetralogy of Fallot (TOF) has a son and a daughter with atrial septal defect (ASD). These offspring produce affected individuals in the third generation with congenital heart defects. This example illustrates autosomal dominant inheritance with variable expressivity (variation in phenotype among those carrying gene mutation). As illustrated in the middle panel, some individuals who appear normal may carry the congenital heart disease gene (reduced penetrance). Some cases of congenital heart disease occur on a sporadic basis (right panel). Typically, parents of sporadic cases have normal genotype and normal phenotype.

history of tetralogy of Fallot or ventricular septal defect. These findings illustrate variable expressivity (individuals with identical genetic defects have varied phenotype) in individuals with *Nkx2-5* mutations (Figure 1). Rather than all affected individuals inheriting the same abnormality in an embryologic pathway, they have inherited a mutation that affects diverse cardiac developmental pathways. *Nkx2-5* is expressed throughout the heart, and yet diverse embryologic pathways are affected by mutation in a single gene. While much remains to be learned about the pathophysiology of *Nkx2-5* mutation, the observations give a new perspective to the clinical recognition of recurrence of cardiovascular disease in the young. Given the diverse phenotypes associated with familial congenital heart disease, it is likely that developmentally important molecules that affect a number of embryologic pathways of regional cardiac development will be identified. Such findings should provide insight into both normal cardiac development and pathogenesis of maldevelopment.

THE CHROMOSOME 22q11 DELETION SYNDROME: AN INFORMATIVE EXAMPLE

The contiguous gene defect syndrome characterized by a microdeletion on the long arm of chromosome 22 (del22q11, CATCH22, DiGeorge locus) may explain five to ten percent of congenital heart disease.[5] Detection of the del22q11 utilizes a straight-forward cytogenetic test. Evaluating this common genetic cause of cardiovascular disease in the young has gone beyond the benchtop and has quickly come to the bedside.

Epidemiological studies show that 80 percent of del22q11 occur on a sporadic basis and 20 percent are inherited (i.e. a parent has the deletion too). While physicians in training are taught that patients with tetralogy of Fallot or interrupted aortic arch should be suspected to have del22q11, virtually every cardiac malformation as well as entirely normal hearts are associated with this genetic defect. The del22q11 genetic defect illustrates both variable expressivity and reduced penetrance (some individuals with the genetic defect appear unaffected) which are regularly identified by molecular genetic studies of cardiovascular disease in the young (Figure 1).

MOLECULAR GENETIC STUDIES: WHERE ARE WE NOW?

During the past decade, advances in molecular genetics have provided an opportunity to re-examine the cause of cardiovascular disease in the young. Genetic-linkage studies have defined disease gene loci for total anomalous pulmonary venous connection, atrioventricular septal defect, patent ductus arteriosus and familial ASD. Similar studies have lead to identification of genes whose mutations cause supravalvular aortic stenosis, Holt-Oram syndrome, Alagille syndrome, Marfan syndrome, long QT syndrome, Brugada syndrome, hypertrophic cardiomyopathy and some forms of dilated cardiomyopathy. These findings and the ongoing investigation of the chromosome 22q11 deletion syndrome indicate an important role of genetics. Taken as a whole, the prospect of understanding the genetic basis of cardiovascular disease in the young has never been better.

SIGNIFICANCE OF IDENTIFYING GENES THAT CAUSE CARDIOVASCULAR DISEASE IN THE YOUNG

Nkx2-5 mutations provide an example of an etiologic bridge between heart defects considered ‘congenital’ because they are discovered at birth and conditions considered ‘acquired’ because they are recognized later. Current practice in pediatric cardiology is centered on reparative surgeries. The malformed heart is regarded as normal cardiac tissues in abnormal morphological relationship. However, *Nkx2-5* is expressed in the myocardium throughout life. How normal is the myocardium in affected individuals? It can be speculated that some of the disappointments of therapy of congenital heart disease have as much to do with the myocardial consequences of abnormal gene function as the structural defects of the heart. Therapeutic strategies based on this possibility are one of the most exciting possible benefits of genetic investigation of congenital heart disease.

Identification of genes that cause cardiovascular disease in the young will improve understanding of the cause and permit insight into both the pathophysiologic basis and definition of risk of developing these problems—two critical elements for prevention. Disease prevention and/or risk modification is a very attainable frontier in the management of cardiovascular disease in the young.

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On the Cover:

PEDIATRIC CARDIOLOGY

The picture on the cover of this special issue of *The Journal* devoted to Pediatric Cardiology is taken from volume 62 of the journal *Surgery,* page 821.[1] It illustrates the procedure used beginning on March 26, 1954 by the University of Minnesota Medical Center team and is, according to the article from which the picture is taken, "one of the major milestones in the development of open-heart surgery."[2]

> In 1954 [C. Walton] Lillehei's group at the University of Minnesota introduced the innovative (and controversial) "controlled crosscirculation" technique in which a human "donor" served as the [pump and] oxygenator for the patient undergoing open-heart surgery. Reflecting his group's focus on congenital heart disease, the first patients were children and the typical donor was a parent with compatible blood. Lillehei's first patient was a one-year-old boy hospitalized for nine months with heart failure due to a large hole between the heart's two main pumping chambers, a ventricular septal defect. Although the cross-circulation technique gave surgeons more time to operate in a dry field and was hailed as a major advance, it was impractical for widespread use because suitable donors were not always available.[3]

The first pediatric cardiac surgery in South Carolina, according to my sources,[4] was performed by Edward Frost Parker, M.D. (1910-1998). Dr. Nunn who was in the operating room indicated that the first procedure done about 1955 was on a ten-year-old girl using hypothermia. The anesthesiologist was Laurie L. Brown, M.D.[5] The patient was thought to have an atrial septal defect, but was found to have patent ductus arteriosis. Dr. Ashmore, a surgical resident during this time, recalled accompanying Dr. Parker on a trip to Minnesota to visit with Dr. DeWall who is credited with developing the bubble oxygenator procedure. According to Dr. Brown's account, Dr. Ashmore built a bubble oxygenator for use with later procedures done with Dr. Parker. Dr. J. D. Ashmore remembered assisting Dr. Parker with four pediatric cardiac surgeries to correct intra-atrial septal defects.

In 1967 Dr. Arno Hohn was hired to form the Division of Pediatric Cardiology at the medical college in Charleston. Dr. Hohn came to Charleston from Buffalo Children's Hospital where he was Director of Cardiac Clinics, Director of Resident Training and Director of the Section of Cardiology. "Separation of the cardiac care in South Carolina, particularly of infants from the adult cardiac section, led to a marked increase in the survival of critically ill babies from about 25 percent to 75 percent."[6]

Jane McCutchen Brown
Waring Historical Library

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1. Special thanks and acknowledgement are due to Robert M. Sade, M.D. in the preparation of this cover story. His assistance in facilitating finding the article in which the cover picture appeared and his consultation on information are greatly appreciated.
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Note: CME activities in neighboring states are listed when space permits.
Contact the Medical College of Georgia, Division of Continuing Education at (800) 221-6437 for other activities.

OCTOBER

Saturday October 2, 1999
Columbia, SC: Embassy Suites Hotel
9th Annual Cardiology Symposium
SPONSOR: USC School of Medicine – Palmetto Richland Memorial Hospital CME Organization
DESCRIPTION: Update on cutting edge issues in cardiology.
TARGET AUDIENCE: Primary care physicians, cardiologists
FACULTY: Dean Ornish, MD; Chris Cates, MD; Lowell Dale, MD; Alan Thomley, MD; and others
CONTACT: Steven Hasterok, MHA; (803) 434-4211
CREDITS: 7.25 hours, AMA Category 1

Saturday October 2, 1999
Augusta, GA: To be announced
Progress in Infectious Disease
SPONSOR: School of Medicine, Medical College of Georgia
DESCRIPTION: Focus upon both new agents and the application of new therapies.
TARGET AUDIENCE: Physicians, physician assistants, nurse practitioners
TUITION: $65.00
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 7.25 hours, AMA Category 1 and AAFP prescribed hours

Friday October 8, 1999
Columbia, SC: South Carolina Medical Association Headquarters
Risk Management in the '90s: Helping Each Other in a Risky Business
SPONSOR: South Carolina Medical Association
TARGET AUDIENCE: Physicians in their first year of practice
CONTACT: Melissa Hamby; ext. 253, (803) 798-6207 or (800) 327-1021
CREDITS: 3 hours, AMA Category 1

Wednesday – Friday October 6-8, 1999
Augusta, GA: Medical College of Georgia
Pediatric Advanced Life Support 1999
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Physicians, nurses, and other pediatric health care providers
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437

Friday – Saturday October 29-30, 1999
Charleston, SC: Charleston Place Hotel
Total Hip Arthroplasty Symposim
SPONSOR: Medical University of South Carolina
DESCRIPTION: This conference will assist orthopedic surgeons by presenting important surgical tips and clinical results of primary and revision hip arthroplasty.
TARGET AUDIENCE: Orthopedic surgeons
FACULTY: Guest and MUSC faculty
CONTACT: Odessa Ussery; (843) 876-1925

NOVEMBER

Saturday - Sunday November 13-14, 1999
Charleston, SC: Charleston Place Hotel – Rivera Theater
Fundamentals of Obesity and Its Management
SPONSOR: Medical University of South Carolina
DESCRIPTION: This conference is designed to update the primary care practitioner in the evaluation, treatment and management of obesity.
TARGET AUDIENCE: Physicians and nurse practitioners
FACULTY: Guest and MUSC faculty
CONTACT: Odessa Ussery; (843) 876-1925

Thursday – Saturday November 18-20, 1999
Atlanta, GA: Grand Hyatt
Seizures, Spells, and Shakes: Neurology for the Non-Neurologist
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Family practice, internal medicine, neurology, psychiatry, psychology
TUITION: $395
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 15 hours, AMA Category 1 and AAFP prescribed hours

Friday – Sunday November 19-21, 1999
Isle of Palms, SC: Boardwalk Inn, Wild Dunes Resort
South Carolina Neurological Association Annual Meeting
SPONSOR: Palmetto Baptist Medical Center
FACULTY: Donald Schmechel, MD: Jan Brandeis, MD; William Koller, MD; Frederick Munschauer, III, MD; David Griesemer, MD; Braxton Wannamaker, MD
CONTACT: Linda Jones, S.C. Neurological Clinic; (803) 779-4325
CREDITS: 9 hours, AMA Category 1

DECEMBER

Friday – Sunday December 3-5, 1999
Charleston, SC: Doubletree Guest Suites Hotel
Frontiers in Pediatrics
SPONSOR: Medical University of South Carolina
DESCRIPTION: This conference is designed to update the primary care practitioner in the specific areas of pediatrics.
TARGET AUDIENCE: Physicians and nurse practitioners
FACULTY: Guest and MUSC faculty
CONTACT: Odessa Ussery; (843) 876-1925

Friday – Sunday December 3-5, 1999
Charleston, SC: Embassy Suites Hotel
Holiday Update in Anesthesia
SPONSOR: Medical University of South Carolina
DESCRIPTION: This conference is designed to provide a forum for anesthesiologists to discuss and learn the most current information on anesthesia techniques, equipment, and drugs.
TARGET AUDIENCE: Anesthesiologists
FACULTY: Guest and MUSC faculty
CONTACT: Barbara Dengle; (843) 886-6873

Saturday – Sunday December 4-5, 1999
Columbia, SC: Clarion Town House Hotel
7th Annual Alcohol and Drug Issues Conference
SPONSOR: USC School of Medicine – Palmetto Richland Memorial Hospital CME Organization
DESCRIPTION: Update on issues in addiction medicine and substance abuse.
TARGET AUDIENCE: All physicians and others interested in addiction medicine
FACULTY: Anthony Dekker, DO; G. Douglas Talbott, MD; Terry Rustin, MD; Richard Irons, MD
CONTACT: Steven Hasterok, MHA; (843) 434-4211

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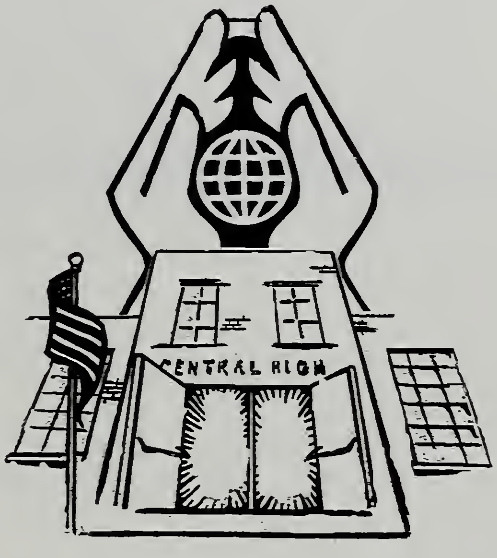
Alliance Page

SAVE SCHOOLS FROM VIOLENCE

The South Carolina Medical Association Alliance (SCMAA) has several standing committees, one of which is the Health Promotion Committee. This committee works with the American Medical Association and its Alliance, and the South Carolina Medical Association as well as state and community agencies. The committee implements many programs to improve the health of the people of South Carolina.

Each year, a new focal project is introduced by our SCMAA President and the planning committee. Our project for the year is "Pregnant Pause," a project designed to educate specifically targeted groups about Fetal Alcohol Syndrome and Fetal Alcohol Effects. The August issue of the *Journal* contains details of this project.



Yearly health projects are accomplished in conjunction with and under the tutelage of the American Medical Association Alliance. Since 1995, SAVE (Stop America's Violence Everywhere), has been a major focus for the medical alliances. The award winning program provides substantial support to organizations that help victims of violence, as well as providing education for entire communities.

More than 600 state and county alliances participate in the AMAA's SAVE activities. SAVE DAY is October 13 and each alliance—national, state, and county—celebrates the day in an appropriate way. Some give gifts to homeless shelters, foster care facilities, or give a presentation at a local school or service club discussing nonviolent alternatives for problem solving.

This year's theme is SAVE SCHOOLS FROM VIOLENCE. This program is so appropriate now considering the senseless violent acts that have occurred recently in schools in this country. School playgrounds have become battlegrounds where our children do not feel safe. Part of our goal is to keep children and innocent people from even becoming victims.

If you, your office staff, or any health care organization would like more information or to participate in any of the health promotion committee projects, call Cathy Boland at 1-800-327-1021, extension 232. Cathy will refer you to your county health promotion chairperson. The SCMAA needs the support of each member to attain its goals.

**Eileen Harris, SCMAA Health Promotion
Chairperson, 1999-2000**

Classifieds

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

THIS TIME IT'S REAL

PREMIUMS FOR TERM INSURANCE ARE GOING UP

For the last several years we've been writing about the impending increase in the prices of term life insurance. The effective date of the legislation that will cause this increase was delayed several times. Now, it's definite that Regulation XXX will be effective January 1, 2000.

No one knows exactly what will happen in the first quarter of the year 2000 but here's what we think will occur. Premiums for polices that are guaranteed for 10 years may be relatively unaffected. Premiums for longer-term policies (15,20,25 or 30 years) will be dramatically affected.

We think there will be two types of term policies offered for these longer durations. The first type may offer premiums that are about equal to today's prices but the premiums will only be guaranteed for 5 years. After that, the insurance company will have the right to increase them.

The second type will offer guaranteed premiums for the full term period but the premiums will be much higher than today's premiums. In either type, the result is the same. A decrease in the guarantees for the policyowner or an increase in price if you want guaranteed premiums.

The prices for term insurance for the balance of 1999 will be much lower than they will be in the year 2000. Right now is the time to review your term life insurance to lock in the lower rates that are currently available. This is true even if you've purchased term in the last few years because premiums have decreased during that time.

Companies today offer more underwriting classes than they did a few years ago. At the beginning of the decade, insureds were classified either as "smokers" or "non-smokers". Most companies today offer at least "standard" and "preferred" risk classes while some also offer a "preferred-plus" class.

The insured must be healthy to qualify for any of these classes. The requirements are more stringent to qualify for preferred rather than standard and even more so to qualify for preferred-plus. Estimates are that approximately 60% of healthy applicants will qualify as standard, 30% as preferred, and 10% as preferred-plus.

The following premiums serve as guidelines for the various risk classes. They are examples only and do not represent any one company's products. Premiums are for $1,000,000 of 20-Year Term for an insured who has not used tobacco for at least 3 years:

UNDERWRITING CLASS	*Age 40*	*Age 50*	*Age 60*
Standard	$1,600	$3,300	$8,200
Preferred	$1,100	$2,600	$6,300
Preferred Plus	$900	$2,200	$5,400

These premiums clearly demonstrate the importance of being in the best risk class for which you qualify. Underwriting decisions vary, so an applicant who is a standard risk with one company may very well qualify as a preferred risk with another.

The advice of a knowledgeable agent who is familiar with the underwriting practices of various companies is vital to help you through this maze. Be aware that the company with the lowest premium does not necessarily offer the best value. There are many factors other than price that you should consider.

Regulation XXX will have a negative impact on the pricing and features of term policies purchased after its effective date. These higher premiums and/or shorter guarantees make today the best time to re-evaluate your term life insurance needs. Your window of opportunity may be very short.

Views expressed herein are those of the authors and in no way represent SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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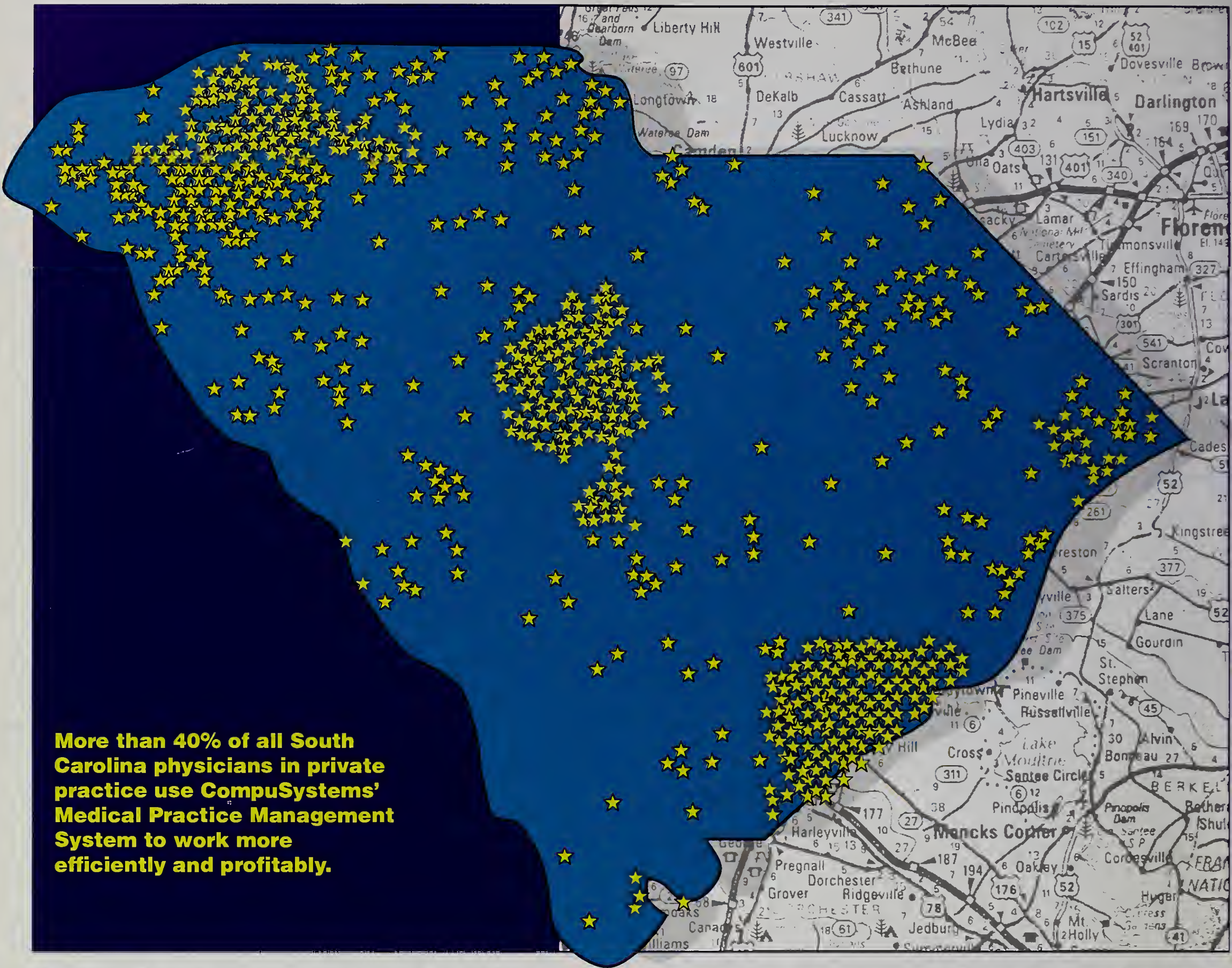
More than 40% of all South Carolina physicians in private practice use CompuSystems' Medical Practice Management System to work more efficiently and profitably.

What can a map tell you about a computer system?

Plenty — if, like this one, it shows how many medical offices in South Carolina use a particular practice management system to run more efficiently, effectively, and profitably.

For example, it might show how a 16-year commitment to "Working for Physicians" has resulted in over 660 installations in South Carolina, representing some 1,930 physicians — over 40% of the 4,600 in private practice in the state!

It might bring home how features like "on-the-fly" refiling, encounter-form tracking, and direct transmission to South Carolina Medicare, Medicaid, and Blue Cross/Blue Shield (with no per-claim charges) are improving physicians' revenue.

It could clarify how critical "one-call" support can be in helping offices stay productive — how telephone support staff, software and hardware engineers, technicians, trainers, and a fleet of service vans can provide support unmatched in the industry.

It might demonstrate how technical expertise brings a host of innovations, starting with the first integrated, direct electronic claims capability in a practice management system.

Or it could validate the concept of regional focus: By selling systems only in the Southeast, a computer company can keep customers up to date on the latest insurance filing requirements.

It could emphasize the flexibility of multi-user, multi-tasking software that runs on the most popular operating system in the world.

And it could illustrate the value of having a computer vendor with a vision for the future and the expertise to make that vision work for you.

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The Journal
OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 95
NUMBER 10
OCTOBER 1999
PAGES 365-406

SPECIAL ISSUE: PEDIATRIC CARDIOLOGY UPDATE FOR THE PRIMARY CARE PHYSICIAN
PART II—ASSESSMENT OF CARDIOVASCULAR PROBLEMS IN A PRIMARY CARE PRACTICE

GUEST EDITOR: J. PHILIP SAUL, M.D.
CO-EDITORS: C. OSBORNE SHULER, M.D., BENJAMIN S. HORNE, III, M.D., CHARLES A. TRANT, JR., M.D.

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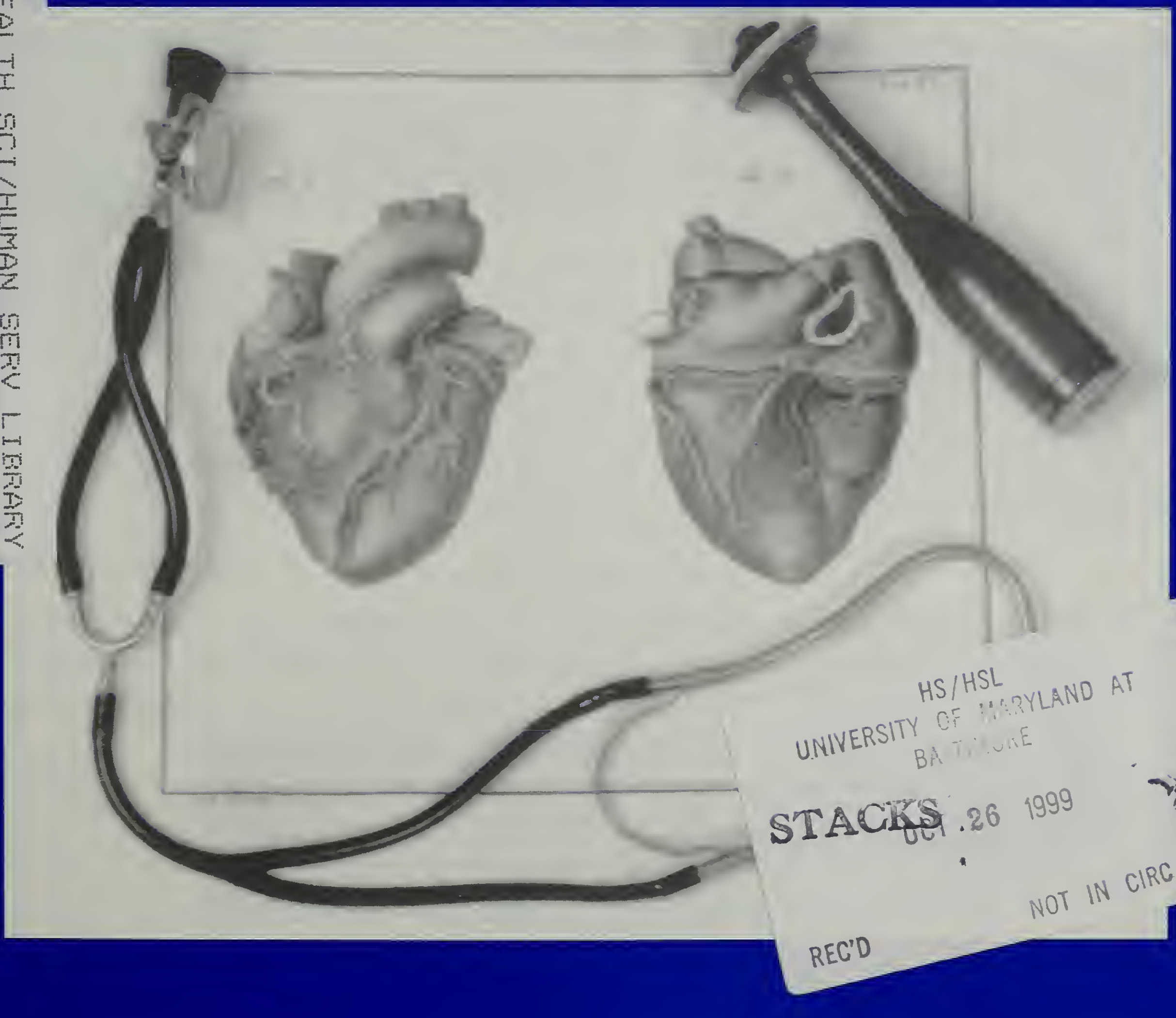

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Practice Clinical Management System
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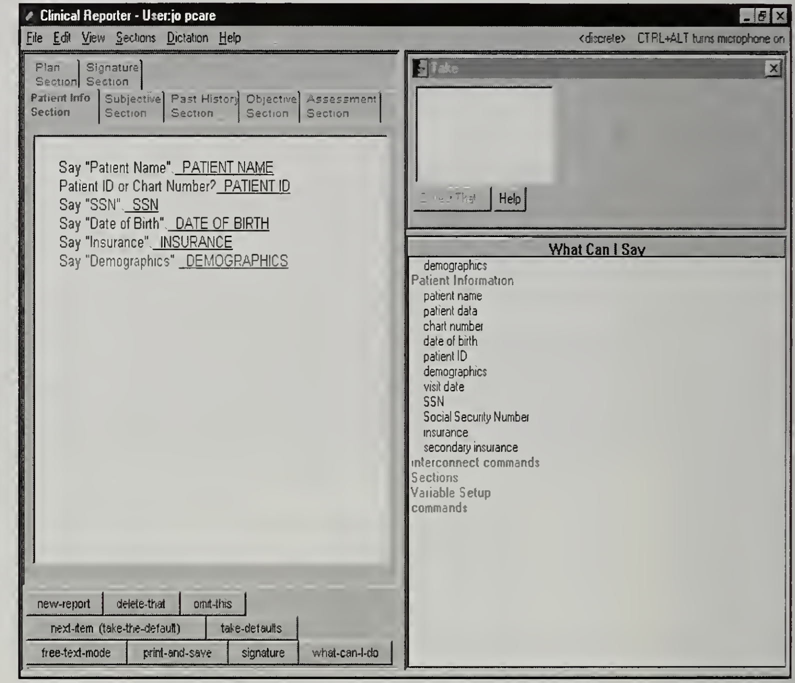
Microsoft Windows & Windows/NT

Whether it be their smiling faces or pictures and images that provide an all encompassing assessment of their medical records and history, Fox Meadows 'P/CMS' makes it all accessible at the touch of a button.

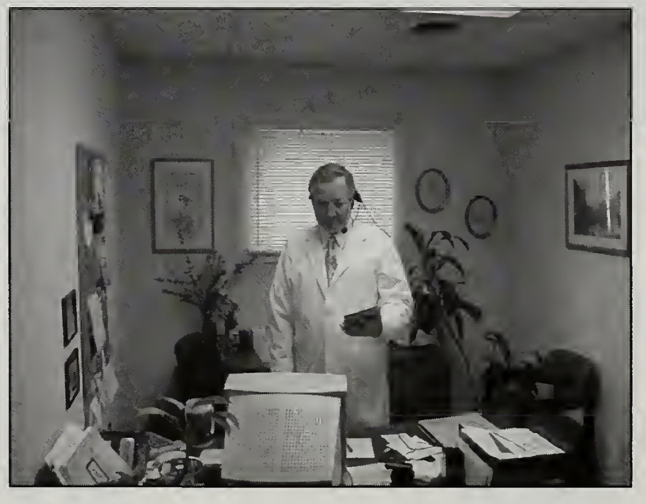


Say "Patient Name". PATIENT NAME
Patient ID or Chart Number? PATIENT ID
Say "SSN". SSN
Say "Date of Birth". DATE OF BIRTH
Say "Insurance". INSURANCE
Say "Demographics" DEMOGRAPHICS

What Can I Say

- demographics
- Patient Information
  - patient name
  - patient data
  - chart number
  - date of birth
  - patient ID
  - demographics
  - visit date
  - SSN
  - Social Security Number
  - insurance
  - secondary insurance
- interconnect commands
- Sections
- Variable Setup
- commands

Using easily accessible & maintainable industry standards such as Microsoft Windows and FoxPro DBMS, Fox Meadows has a suite of ready to use application software to run any and all aspects of a medical or clinical practice. The system can easily be customized providing immediate results.



Speak to your computer and save time, monthly transcription fees, and errors and omissions. Do Chart Notes using Lernout & Hauspies voice recognition system and medical dictionary. Lernout & Hauspie is one of the premier providers of voice recognition technologies and is a valued business alliance of Fox Meadows.

P/CMS Software includes:

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American Medical Association
Organized Medical Staff Section (AMA-OMSS)
invites your medical staff to be represented at the

1999 Interim Assembly Meeting, December 2-6, in San Diego

Vision
Voice
Victory

If physicians want to be effective agents for change in improving today's health care, they need ***a vision, a voice, and a victory.***

The vision comes from grassroots physicians...representives of hospital or other health care organization medical staffs...that come together in a national forum to share ideas, concerns, and interests.

The voice is the AMA-OMSS. It resonates within the AMA and is projected to Congress, private and public sector leaders, and the public through the implementation of policy and other advocacy initiatives.

The victory is the fruit of your effort to make a difference.

Be part of the process. Send a representative* from your medical staff to the **1999 Interim AMA-OMSS Assembly Meeting, December 2-6, in San Diego**. *There is no fee to attend.*

OMSS representatives can:

- Submit resolutions prior to the Assembly meeting.
- Testify at Reference Committee hearings and vote in the Assembly.
- Participate in special issue forums.
- Network at state and regional caucuses.
- Attend education programs. (*Topics include: managed care contracts, new CPT codes and software, preventing and managing adverse outcomes, improving physician image through community involvement, protecting your practice from embezzlement, conflict of interest policies, technology and medical staff reengineering, ways to be an effective agent for change, reestablishing collegiality in the medical profession, and federal and state legislative affairs.*)

For more information on how to register, call **800 262-3211** and **ask for the Department of Organized Medical Staff Services** or e-mail us at **omss@ama-assn.org**.

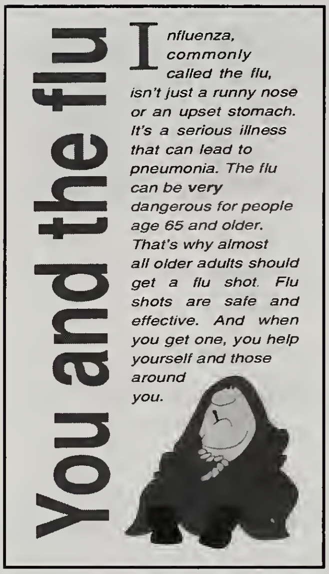
* Must be an AMA member

American Medical Association
Physicians dedicated to the health of America

South Carolina's **Physicians** make the **Difference.**

Carolina Medical Review℠, along with the South Carolina Coalition for Older Adult Immunization and the South Carolina Mammogram Coalition, needs your help to raise awareness among Medicare patients regarding the importance of receiving a yearly mammogram and influenza vaccination.

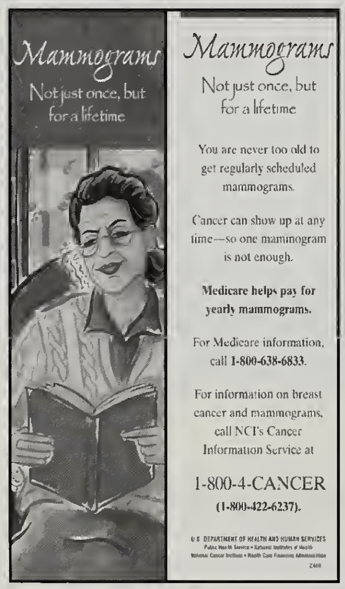
*Studies show that an individual is **more likely** to take advantage of **preventive services** when his/her **physician recommends** them.*



You and the flu

Influenza, commonly called the flu, isn't just a runny nose or an upset stomach. It's a serious illness that can lead to pneumonia. The flu can be very dangerous for people age 65 and older. That's why almost all older adults should get a flu shot. Flu shots are safe and effective. And when you get one, you help yourself and those around you.

- Governor Jim Hodges has proclaimed October 24-30, 1999, as Senior Vaccination Week.
- South Carolina Medicare Part B Claims data show only 40.8% of beneficiaries received an influenza immunization in 1997.
- The influenza vaccination is a preventive service covered by Medicare Part B every flu season.


Mammograms
Not just once, but for a lifetime

Mammograms

Not just once, but for a lifetime

You are never too old to get regularly scheduled mammograms.

Cancer can show up at any time—so one mammogram is not enough.

Medicare helps pay for yearly mammograms.

For Medicare information, call **1-800-638-6833.**

For information on breast cancer and mammograms, call NCI's Cancer Information Service at

1-800-4-CANCER

(1-800-422-6237).

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service • National Institutes of Health
National Cancer Institute • Health Care Financing Administration

- October is National Breast Cancer Awareness Month.
- South Carolina Medicare Part B data show only 21.6% of beneficiaries received a mammogram in 1997.
- Approximately 2600 South Carolina women will be diagnosed with breast cancer this year.
- Mammography is a preventive service covered by Medicare Part B on a yearly basis.

For free patient education materials like those shown on this page, contact Carolina Medical Review℠ at (803) 731-8225, or (800) 922-3089.

This message is brought to you by Carolina Medical Review℠, a non-profit, federally funded quality improvement/peer review organization, which serves to monitor and improve the quality and access of health care given to South Carolina's Medicare beneficiaries.

President's Page

SUPPORT THE IMPORTANT WORK OF THE SCMAA

The South Carolina Medical Association Alliance (SCMAA) is just over 50 years old and still growing. At least, its trying to grow. Sometimes, however, we as physicians get in the way of the growth. The Alliance has a very long and distinguished history of community projects ranging from children's issues to senior citizens activities, fund raising for medical student education, and the list goes on.

"How can I be in the way of my spouse's activities in the Alliance," you are hopefully asking yourself by now. If you have received this issue of *The Journal*, it is probably because you are a dues paying member of the SCMA, and therefore "exempt" from these disparaging remarks. On the other hand, you might be in that 28 percent of physicians in South Carolina that do not belong to the SCMA, and therefore you are standing in the way of your spouse being an active member of the Alliance. The physician member of the household/partnership MUST belong to SCMA for the spouse to belong to the SCMAA!

Shirley Meiere, the current SCMAA President, is out there everyday telling folks what they do, who they are and why they exist. Let me remind all of our readers that they exist to support us in our daily activities. Our support of the Alliance begins with our membership in the SCMA, and then with full support of our spouses.

I am very pleased with the reception I have received as I travel to represent you. Along with Bill Mahon and Ron Fitzwater, I have been to several county societies and several are still on the itinerary. We have been carrying the message about the AMA's activities, talking about the decision to form collective bargaining units and the position the SCMA delegation took in that discussion. We have been talking about the effort to pass a Patients' Bill of Rights and how there is a bipartisan effort developing in the House of Representatives to get this accomplished. We have talked about developing the Quality Health Care Coalition Act of 1999, authored by Rep. Tom Campbell of California which seeks anti-trust relief and allows self-employed physicians to engage in joint negotiations. Two members of the South Carolina Delegation, Reps. Lindsay Graham and James Clyburn, have signed on as co-sponsors. (Please thank them for this effort in your correspondence with them.)

I do appreciate the reception we have had and the opportunity to serve this association. I look forward to the rest of the year and hope I get to see YOU in these travels.

William H. Hester, MD

William H. Hester, M. D.
President

The Journal OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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Visit our website: www.scmanet.org

October 1999

MEDICAID UPDATE

Every business and organization that relies on computer systems and electronic devices must address the Y2K problem. For all of us in the health care industry, it is a patient care issue as well as a business and technical problem. It is critical that all necessary steps are taken to ensure that systems continue to work properly after January 1, 2000.

It is vital that you continue to bill the agency correctly so that they may in turn reimburse you for services provided to Medicaid recipients. Please be aware that the format for filing Medicaid claims will not change in order to accommodate the Year 2000. Date fields will continue to use a 2-digit format to denote year values. There has been some confusion because other health insurance programs (e.g., Medicare) are moving to a 4-digit format to denote the year.

However, the Y2K computer problem is not only a computer issue, but effects anything that depends on a microchip or date calculation. Below are suggested steps to prepare your office.

1. Identify your critical items. These are items without which you cannot run your office. Focus on those first.
2. Contact the vendors and service contractors for your computer hardware and software, service companies such as your security company or paging system, and your medical equipment suppliers to obtain information regarding the Y2K status or impact on their products.
3. Update or replace systems, software programs, and devices that are not Y2K ready and that you decide are critical for your business continuity. There is no time to waste as the replacement systems you need may be on back order.
4. Keep notes on all your communications and testing information for possible use later. Do not assume a system or program is ready because someone said it is. Get assurance in writing and/or attempt to have them tested.
5. The original manufacturer of a product knows the product best and is in the best position to assess the Y2K status of it.
6. Develop contingency plans in the event that something goes wrong.
7. While storing claim information on paper may be part of your contingency plan, it is ill advised to submit hardcopy claims for payment, as an enormous increase in paper claims could delay your payments.

The South Carolina Department of Health and Human Services does not assume responsibility for your Y2K compliance. The information presented here is not a guarantee or warranty with respect to Y2K issues that may affect DHHS or any program it administers.

If you have any questions regarding Y2K issues of the South Carolina Medicaid Program's electronic media billing specifications, please contact Rhonda W. Morris, Director of the DHHS Division of Information Systems Management at (803) 898-2999.

"WHAT'S WRONG AND WHAT'S RIGHT ABOUT MANAGED CARE?"

Ben Carson, MD, Chief of Pediatric Neurosurgery at Johns Hopkins University Hospital and a world-renowned neurosurgeon, will serve as the keynote speaker at the first Fall Seminar of the National Association of Managed Care Regulators. On November 1, 1999, at the Charleston Place Hotel, Dr. Carson's presentation to federal and state regulators will focus on the difficult practice challenges faced by health care professionals as they seek to provide high quality, cost-effective care in an increasingly regulated and ever-complex medical delivery environment.

For additional information or to inquire about attending the keynote address or the entire seminar in Charleston on November 1-2, 1999, please contact Sandra Bogart at (800) 422-5611.

MINI CONSULTATION PROGRAM
A Service of the Medical Economics Department

The mini consultation program was developed by the South Carolina Medical Association's Medical Economics Department to allow physicians and their office personnel to communicate their problems one on one. The SCMA staff visits county medical societies across South Carolina to conduct 30-minute consultations for SCMA members free of charge. Practices receive assistance from the Medical Economics Department in resolving concerns with:

- Billing
- Claims Resolution
- Coding
- Contracts
- Information Technology
- Legal Guidance
- Legislative Issues
- Medical Records
- Operational/Financial Services
- Strategic Planning

The sessions are arranged in 30-minute intervals at local county medical societies. Upcoming consultation dates are listed below. To set up a consultation at one of these locations, your office should contact the Medical Economics Department at the SCMA by calling (803) 798-6207, extension 236 or statewide at (800) 327-1021, and a registration form will be faxed to you.

County	Consultation Date
Charleston	Tuesday, November 16, 1999
Columbia	Tuesday, October 26, 1999
Greenville	Wednesday, November 10, 1999

Prior to the consultation, the Medical Economics staff asks that you prepare by collecting questions and documentation of specific problems within your practice. Each practice that attends a consultation will receive a handbook of reference materials to answer the most frequently asked questions. Included in the handbook is information on Managed Care, Medicaid, Medicare, and Records Retention.

For more information regarding the programs offered by the SCMA's Medical Economics Department, please contact Kelly Danias at (803) 798-6207, statewide at (800) 327-1021, extension 236, or via e-mail at kelly@scmanet.org.

SUPPORT OUR FUTURE PHYSICIANS

In last month's newsletter, we announced that the South Carolina Medical Association (SCMA) Foundation is resuming our program to send Season's Greetings cards for you in lieu of other gifts you may have been sending during the holiday season.

By now you should have already received the flyer about the Season's Greetings program. Please pledge your support of our future physicians by making a tax-deductible contribution to the SCMA Foundation. For a minimal contribution of $25 per person (or group name), you can say "thank you" to those who have helped your practice during the past year. At the same time, you will be financially assisting a medical student. In honor of each contribution, the SCMA Foundation will send an attractive Season's Greetings card to each person or group in recognition of your gift. Simply send your list along with current addresses and your contribution to the SCMA Foundation no later than December 15, 1999. Remember that today's medical student is tomorrow's physician who will be dedicated to the health of South Carolinians in the coming years.

If you have any questions about the program, please contact Melissa Hamby (803) 798-6207, ext. 253 in Columbia, (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

PHYSICIANS CARE NETWORK UPDATE

Currently, there are 8,317 participating physician locations, 898 participating ancillary locations and 97 participating hospitals. PCN has 130 contracted groups with 66,592 covered lives. We will continue to provide information as contracts are received.

NEW GROUPS:

- Famillie Printing; Spartanburg; effective 8-1-99
- Metal Builders; Spartanburg; effective 8-1-99
- Butter Travel Services; Spartanburg; effective 8-1-99
- Curtis Mathes; Spartanburg; effective 8-1-99
- Hyman Paper Company; Florence; effective 8-15-99
- Ventex; Spartanburg; effective 8-1-99
- Carolina Machinery/Winner Word; effective 10-1-99
- Community Newspaper Holdings; effective 5-1-99
- Federal-Mogul Corporation; effective 9-1-99

TERMINATIONS:

- Beaufort-Jasper Comprehensive Health Services; Ridgeland; effective 9-1-99
- Mau, Inc.; Augusta, GA; effective 8-1-99

RENEWALS:

- Episcopal Diocese of Upper South Carolina; effective 10-1-99
- Carolina Filters, Inc; effective 6-1-99

Please remember to notify PCN when you have a tax ID number change, address change, or when adding or terminating a physician from your group. Early notification will ensure accurate claims payment and provider directory accuracy.

If you have any questions about PCN, please contact Provider Relations at (803) 771-0077, or statewide at (888) 323-9271; fax (803) 771-9474.

IMPORTANT NOTICE: OUR ADDRESS HAS CHANGED!

All PCN Claims should be sent to:
PHYSICIANS CARE NETWORK
P. O. Box 101111
Columbia, SC 29211-1111
Phone: (803) 771-0077
(888) 323-9271
Fax: (803) 771-9474

Send PCN Correspondence to:
PHYSICIANS CARE NETWORK
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The Journal
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INITIAL EVALUATION AND MANAGEMENT OF THE NEWBORN WITH SUSPECTED HEART DISEASE

C. OSBORNE SHULER, M. D.*
LUTHER C. WILLIAMS, M.D.

A newborn infant with suspected congenital heart disease, particularly if the baby is cyanotic, demands prompt evaluation. There are several diagnostic tests available to the practitioner, in addition to a careful physical examination, that can aid in screening for significant heart disease and deciding whether referral to a tertiary care center is necessary.

Chest X-ray. PA and lateral chest films are used to determine the presence of cardiomegaly, abnormal heart contour, and abnormal pulmonary blood flow. Certain structural defects are associated with characteristic chest X-ray findings (Table 1). The assessment of pulmonary blood flow on a chest film is frequently difficult in a newborn, but it may be possible to differentiate lesions with high pulmonary flow (e.g. transposition, AV septal defect) from those with low pulmonary flow (tetralogy, pulmonary atresia). However, subtle abnormalities of pulmonary blood flow may not be apparent in the first few days of life.

Electrocardiogram. The ECG as a diagnostic tool for structural heart disease is of limited value. Since normal newborns exhibit right ventricular electrical dominance and a rightward QRS axis, any variation should be considered suspect (Table 2). The ECG may be considered a useful screening tool in infants with Down's syndrome. Since about 50 percent will have congenital heart disease, and half of those will have some type of AV septal defect, the finding of a left superior axis on the ECG is highly suspect, and the cost is justified. However, the most effective use of the ECG in the newborn is for diagnosis of cardiac dysrhythmias and conduction abnormalities (e.g. premature beats, supraventricular tachycardia, congenital complete heart block).

Pulse Oximetry. Cyanosis is not generally apparent to the naked eye unless the oxygen saturation is below 85 percent. Pulse oximetry is non-invasive and may be of use in detecting subtler degrees of arterial desaturation. It is especially useful in determining the patient's response to oxygen administration, and in assessing for differential cyanosis (present in only the upper or lower extremities). Combined with arterial blood gases, pulse oximetry is useful in differentiating central cyanosis from other causes of hypoxemia.

The chest X-ray, electrocardiogram, and pulse oximetry are readily available at most community hospitals. More extensive evaluation of suspected heart disease in newborns is best carried out at a referral center.

Echocardiography. The echocardiogram has

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Table 1

Cardiac defect	Chest X-ray finding
D-transposition of great arteries	Egg-on-a-string silhouette
Tetralogy of Fallot	Boot-shaped silhouette
Supracardiac TAPVR	Snowman-shaped silhouette
Ebstein's anomaly	Profound cardiomegaly; "square" heart

replaced most other modalities as the "gold standard" in diagnosing congenital heart disease. Combined with color-flow Doppler interrogation, the transthoracic echocardiogram provides prompt assessment of cardiac anatomy and function. Because infants have excellent echocardiographic windows, the more invasive transesophageal approach is rarely necessary to obtain an accurate diagnosis.

The echocardiogram allows for real-time imaging of cardiac structures as well as accurate measurement of chamber and vessel size. Doppler technology, both pulsed and continuous wave, is utilized to assess blood flow velocities within the heart and great vessels. Calculations can then be made to derive gradients across valves or between cardiac chambers, affording reliable and reproducible estimates of pressure relationships.

Prenatal identification of most congenital heart defects is possible using fetal echocardiography. Prenatal diagnosis allows for referral of the mother and fetus with a severe congenital heart defect to a tertiary center for delivery and appropriate postnatal management.

With advancements in technology, echocardiography via telemedicine allows the transmission of echocardiograms over special telephone lines. This modality greatly increases the accessibility of pediatric echocardiography and the expertise of the specialist, permitting the small community hospital to perform echocardiograms and have them interpreted at a regional referral center.

Cardiac Catheterization. As a diagnostic tool, cardiac catheterization has been virtually replaced by echocardiography. It is no longer necessary for an infant to undergo this invasive procedure for the purpose of obtaining a diagnosis. Occasionally, infants with complex cardiac defects are catheterized to clarify fine points, such as coronary artery anatomy or pulmonary artery distribution. More recently, however, the pediatric catheterization laboratory is being used for interventional procedures (valve dilation, septal defect and PDA closure) and for electrophysiologic studies and ablation procedures.

Conclusion. Although the chest X-ray, electrocardiogram and pulse oximetry are useful in screening infants for congenital heart disease, the transthoracic echocardiogram remains the definitive diagnostic tool when it is interpreted by a qualified pediatric cardiac specialist. With the increasing availability of telemedicine in South Carolina, the echocardiogram will allow for expeditious diagnosis of significant congenital heart disease and timely referral to the appropriate medical center for definitive management.

Table 2

Defect:	ECG findings:
Tricuspid atresia:	Left axis deviation; LV electrical dominance
Atrioventricular septal defect (AV canal)	Left superior QRS axis; RVH or BVH
Hypoplastic left heart syndrome	RVH with diminished or absent LV forces

PEDIATRIC CARDIAC AUSCULTATION

HENRY B. WILES, M.D.*
J. PHILIP SAUL, M.D.

Auscultation remains the preeminent physical examination procedure for the detection of congenital heart malformations in children. This observation is especially true for the primary care physician who screens large numbers of both well and ill children. The auscultatory skill of the primary care physician is repeatedly demonstrated by the appropriate and accurate referral of children to the facilities of the Children's Heart Program of South Carolina.

THE AUSCULTATORY EXAM

A complete auscultatory examination includes careful listening in a quiet room to a quiet patient, not always an easy task in many pediatric patients. All areas of the chest, axilla, neck and back should be examined with the stethoscope. The chest examination should be repeated in the sitting, supine and standing position while the patient breathes normally. Special maneuvers such as squatting (mitral valve prolapse, hypertrophic cardiomyopathy), valsalva maneuver (innocent murmurs), deep breathing (splitting of the second heart sound) or neck turning (venous hum) are sometimes helpful in differentiating murmurs in children. Performing all these features of the auscultatory examination in every patient at the primary care physician's office is not practical. The most useful compromise is listening in the aortic, pulmonic, tricuspid and mitral areas in a supine position. In a quiet patient this allows the best sensitivity for detecting the majority of pathologic childhood murmurs.

The six characteristics of a heart murmur remain the same: timing, location, quality, duration, loudness and radiation. A systematic description of these six characteristics should be performed for all heart murmurs heard in a child. Timing (systolic or diastolic) is paramount in differentiating murmurs, with quality and location being nearly equally as important. Duration, followed by loudness and radiation, often reflect the degree or severity of the malformation rather than being specific for that malformation.

MURMURS: INNOCENT AND NOT SO

Murmurs are extremely common in pediatric patients, occurring in as a many as 50 percent of children between the ages of two and ten years, but also occurring in younger and older children. Further, many of these murmurs may be as loud as 3/6, even though they do not reflect underlying cardiac pathology, or are *innocent*. Under these circumstances the goal of the primary care physician must be to differentiate most innocent murmurs from pathologic ones, since it is impractical and inefficient to send 50 percent of some age groups to the pediatric cardiologist for an evaluation.

Innocent murmurs are certainly caused by blood flow in the heart; however, most pediatric cardiologists, as well as the American Heart Association, use the term *innocent*, rather than *functional* or *flow*, to differentiate these murmurs from those caused by abnormal flow across a normal cardiac structure. Innocent murmurs are heard primarily because blood flowing in the heart always makes noise. In children, the heart is close enough to a relatively thin chest wall to hear these sounds, again particularly in two to ten year olds. In fact, when a microphone is placed on the tip of a catheter inside the heart, sounds are heard in subjects of any age. The difference between these normal sounds and pathological ones is that the innocent ones typically emanate from either a single cardiac structure, such as a valve leaflet vibrating at a characteristic frequency, or relatively low velocity blood flow which generates low frequency eddy currents and turbulence. Alternatively, pathologic murmurs always come from pressure gradients, which generate high velocity blood flow, which in turn generates a broad mixture of high frequency eddies. Thus, there is a difference in sound quality between innocent and pathologic murmurs. Innocent murmurs are lower

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Innocent	Pathologic
Lower frequency, < 200 Hz	Higher frequency, 400-1500 Hz
Single frequency, vibratory	Broad frequency content, harsh
Lower amplitude, ≤ 3/6	Higher amplitude, ≥ 3/6
Change with position	Not positional
Change with physiological state	Less change with physiological state

Table 1. Characteristics of Innocent and Pathologic Murmurs

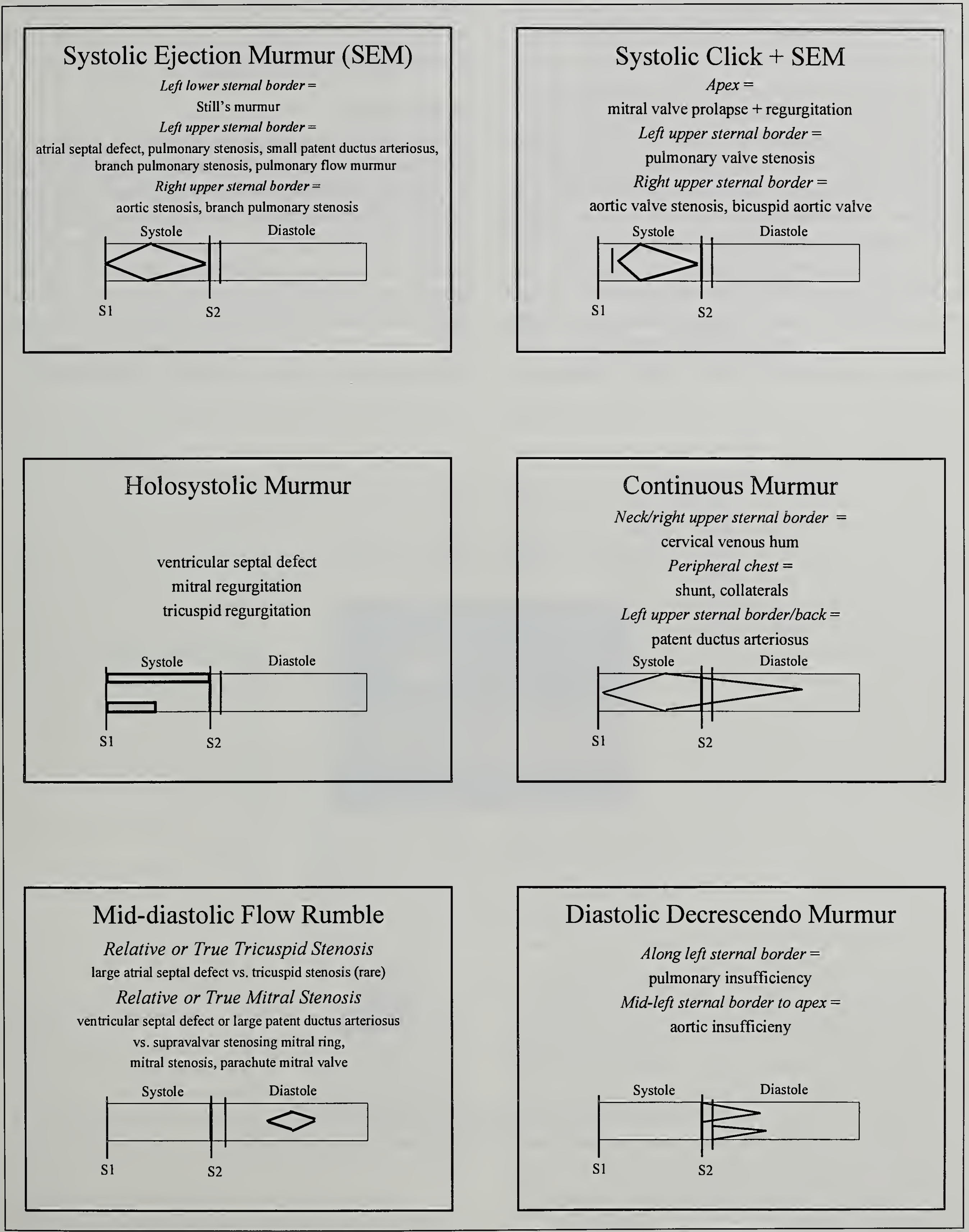
frequency (<200 Hz), often consist of a single frequency making them sound vibratory, and usually of lower amplitude (≤ 3/6) (Table 1). Pathologic murmurs are higher frequency (400-1500 Hz), never consist of a single frequency, but are always a broad mix, making them sound harsh, and usually higher amplitude (≥ 3/6). Both innocent and pathologic murmurs may be systolic ejection or continuous (Figure 1), but pure diastolic murmurs may always be considered pathologic. Although these rules are not fixed, especially for amplitude, they work very well as guidelines.

The innocent murmurs of childhood include the vibratory Still's murmur, pulmonary flow murmur, the venous hum, and carotid bruit. The transient systolic or continuous murmur generated by a closing ductus in a newborn infant falls somewhere in between innocent and pathologic. A vibratory Still's murmur is a systolic ejection murmur (Figure 1, top left), and is the most common innocent murmur. It is typically heard at the apex or left lower sternal border, and is often described as having a plucked string, or twangy characteristic. The sound probably originates from a pulmonary or aortic valve leaflet which vibrates at a characteristic low frequency as the blood rushes by it, much the way a mast stay vibrates in the wind on a sailboat. Though they are not all so classic, many murmurs fall into this Still's category. Pulmonary flow murmurs are also systolic ejection (Figure 1, top left), and may be due to flow across a normal pulmonary valve, when heard at the left upper sternal border, or flow through slightly narrow pulmonary branches in a normal newborn, when the murmur radiates to the axilla or back. These murmurs are low frequency, as described above, and may be heard intermittently, perhaps only during periods of activity or fever, or may be louder during such periods. Thus, low frequency low intensity flow murmurs heard during an acute illness in an otherwise healthy child should be listened to again when the child is well before proceeding with any further evaluation. Pathologic murmurs tend to be independent of physiological state. Importantly, innocent flow murmurs sometimes radiate to the neck, but such a finding should probably precipitate a referral to the pediatric cardiac specialist.

The venous hum, another common innocent murmur, is a continuous murmur (Figure 1, middle right), typically heard in the neck or high sternal border, left or right. It is almost never heard when supine. The quality is typically that of a very low frequency vibratory hum and the intensity can be quite loud, up to 3/6. The sound probably emanates from veins in the neck which collapse due to the normal low pressure in the right atrium and vibrate similar to a partially occluded straw being lifted from a glass or a rubber tube draining a tank. Because of this mechanism, a venous hum should disappear completely when supine, an important differentiator from pathologic continuous murmurs. Carotid bruits are less common as an innocent murmur of childhood, but rarely if ever represent carotid atherosclerotic disease in a child.

WHEN TO REFER AND EVALUATION

If a murmur cannot clearly be labeled as innocent, based on characteristics such as its sound quality, intensity, location and response to posture or physiological state, then referral to the pediatric cardiovascular specialist is probably indicated. Other indications for referral are any pure diastolic murmur, the additional presence of clicks or gallops, or any other signs or symptoms of cardiovascular disease, such as shortness of breath or decreased exercise tolerance. In addition, any murmur in a newborn which does not resolve spontaneously by day two of life should prompt a consultation prior to or at the time of hospital discharge. Most murmurs in infants < two months of age probably need



Systolic Ejection Murmur (SEM)

Left lower sternal border =
Still's murmur
Left upper sternal border =
atrial septal defect, pulmonary stenosis, small patent ductus arteriosus, branch pulmonary stenosis, pulmonary flow murmur
Right upper sternal border =
aortic stenosis, branch pulmonary stenosis

Systolic Click + SEM

Apex =
mitral valve prolapse + regurgitation
Left upper sternal border =
pulmonary valve stenosis
Right upper sternal border =
aortic valve stenosis, bicuspid aortic valve

Holosystolic Murmur

ventricular septal defect
mitral regurgitation
tricuspid regurgitation

Continuous Murmur

Neck/right upper sternal border =
cervical venous hum
Peripheral chest =
shunt, collaterals
Left upper sternal border/back =
patent ductus arteriosus

Mid-diastolic Flow Rumble

Relative or True Tricuspid Stenosis
large atrial septal defect vs. tricuspid stenosis (rare)
Relative or True Mitral Stenosis
ventricular septal defect or large patent ductus arteriosus
vs. supravalvar stenosing mitral ring,
mitral stenosis, parachute mitral valve

Diastolic Decrescendo Murmur

Along left sternal border =
pulmonary insufficiency
Mid-left sternal border to apex =
aortic insufficieny

Figure 1. Features of innocent and pathologic murmurs as a function of the cardiac cycle.

evaluation as well. Although not always necessary, the best single test for determining whether a structural defect is the basis for the murmur is a complete pediatric echocardiogram, performed and interpreted by individuals specifically trained and experienced with the diagnosis of congenital heart disease. The necessity of a pediatric cardiac specialist comes from a number of differences in the pediatric and adult echo exams, the most important of which are subxyphoid and parasternal views with color doppler to examine the atrial and ventricular septa, identification and examination of all four pulmonary veins and suprasternal notch views to examine the aortic arch and great arteries. The diagnoses behind pathologic murmurs are obviously quite varied (Figure 1), and each has its own set of tests and therapies, but a full discussion is beyond the venue of this article.

SUMMARY

Murmurs will be a frequent finding during the well child pediatric exam and perhaps more frequent during the evaluation of an acute illness, but most of these murmurs are innocent. Understanding the variety of causes of innocent murmurs should help identify them as such. However, referral to the pediatric cardiac specialist is appropriate in newborns and small infants, when the findings are not entirely consistent with an innocent murmur, or when there are other reasons to suspect heart disease.

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CHEST PAIN IN CHILDREN

BENJAMIN S. HORNE, III, M.D.*

Chest pain is a common problem in pediatrics and the second most common reason for referral to a pediatric cardiologist.[1,2,3] A cardiac etiology is found in only four to six percent of cases, and the chest pain is rarely associated with a life threatening disease.[3,4] However, the potential for sudden death has resulted in a heightened concern in the public and medical communities, which is often inflamed by the well publicized death of a local young athlete or high profile professional athlete.[5] Thus, the patient may be afraid that he is having a heart attack (44 percent), has heart disease (12 percent), or even has cancer (12 percent).[1,2] In reality, adolescents are more likely to have psychogenic chest pain with identifiable sources of stress, whereas younger patients presenting with chest pain often have a true cardiorespiratory etiology.[4] In most cases, reassurance is the treatment of choice, once the more serious causes of chest pain have been ruled out.

Non-cardiac Chest pain. The causes of chest pain vary widely among studies, and the differential diagnosis is lengthy.[3] The most common non-cardiac causes of chest pain are idiopathic (12-85 percent), chest wall and musculoskeletal pain (15-79 percent), psychogenic (20-29 percent), respiratory (12-21 percent), and gastrointestinal (4-7 percent).[1,3,4,6,7] The coexistence of organic (including cardiac) and psychogenic diseases is not uncommon and further complicates the evaluation process. Psychogenic conditions commonly associated with chest pain include anxiety, conversion reaction, depression, and hyperventilation.

Non-cardiac chest pain occurs predominately at rest; however, chest wall pain, including musculoskeletal pain, may be exacerbated with movement, deep inspiration, or compression of the sternum. Examples of chest wall pain include the precordial catch syndrome, costochondritis, pleuritis, and trauma. The precordial catch syndrome occurs as a sharp pain at rest that may be aggravated by deep inspiration. It is often localized over the precordium and may last from a few seconds to a few minutes.[7] Spontaneous pneumothorax most commonly occurs in tall teenage and young adult males. The severity of the chest pain in pneumothorax is not predictive of the extent of the problem, as the symptoms can range from no pain to severe pain (with dyspnea and cyanosis).

Cardiac Chest Pain. A cardiac etiology is found in only four to six percent of chest pain.[3,4] Life-threatening cardiac causes are very uncommon, however when present, rapid recognition and treatment may help prevent serious morbidity.[3,7] Chest pain with exercise should result in prompt evaluation without further activity being permitted until a medical release is granted. This evaluation should specifically rule out the most common causes of sudden death in young athletes, which are: hypertrophic cardiomyopathy (24-48 percent), coronary artery abnormalities (18-24 percent), premature atherosclerosis (two-14 percent), myocarditis (three-twelve percent), Marfan syndrome (four percent), aortic valve stenosis (four percent), significant mitral valve prolapse (two-four percent), idiopathic cardiomyopathy (three percent), and dysrhythmias (two percent).[5] Chest pain with associated symptoms of syncope or near-syncope, palpitations, or diaphoresis, should also be evaluated,[3,7] as should chest pain in patients with a history of congenital heart disease or a family history of sudden death. Many of the important cardiac causes of chest pain can be identified by auscultation,[3] including aortic stenosis, hypertrophic obstructive cardiomyopathy, and mitral valve prolapse. However, some serious cardiac disease, such as myocarditis, non-obstructive cardiomyopathies, coronary artery abnormalities, myocardial infarction, and arrhythmias, may not have any abnormal findings on physical exam. Therefore, these problems usually require an electrocardiograph, echocardiogram, or other studies for diagnosis.[5,8,9]

Evaluation. For the large majority of patients, a thorough history and physical will determine the etiology and seriousness of the chest pain.[2,3] The initial questions should be directed to the patient, while asking the parents to delay their responses until the end of the history. The history should include details about chest pain frequency, duration, clustering, setting, time of day, relation to meals, relation to menses, precipitating factors, exacerbating factors, and relieving factors. Any association of chest pain with activity, movement, rest, body position, and deep inspiration should be noted. The patient should be asked about the presence of associated symptoms, including palpitations, headaches, shortness of breath or dyspnea, paresthesias or tetany of the extremities, syncope, near-syncope, dizziness, or sensation of impending doom. The family history should include questions about similar symptoms, as well as syncope, arrhythmias, sudden death, and congenital heart disease (especially hypertrophic cardiomyopathy, Marfan syndrome, and long QT syndrome). The social history should inquire about various stressors, such as family dynamics, boyfriend / girlfriend problems, school, extracurricular activities, employment, and social habits (tobacco, drugs, and sexual activity).[3,7] The physical exam should naturally emphasize evaluation of the cardiovascular and respiratory systems, noting any murmurs, clicks, rubs, irregular rhythm, abnormal pulses, or changes in breath sounds. Palpation of the chest, abdomen, and upper extremities should be performed, including gentle but deliberate manual compression of the sternum and ribs in an attempt to recreate the pain. Laboratory studies are not usually required;[3,4] however, in patients referred to a pediatric cardiologist for evaluation of chest pain, routine electrocardiograms and chest radiographs have been shown to uncover heart disease in patients not otherwise known to have heart disease.[8,9] Other studies, such as echocardiography, treadmill stress testing, ambulatory EKG monitoring, and EKG event recording should be ordered as directed by the history and physical exam. These studies may be more informative when performed in conjunction with a pediatric cardiology consultation.[3,5,9]

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Treatment. The treatment of serious problems usually requires subspecialty referral.[3,7,10] However, reassurance is the treatment of choice, once the more serious causes of chest pain have been ruled out.[2,3] Reassurance requires time, trust, and the promise of further evaluation if needed.[3,7] The time devoted to an unhurried exam is not only likely to provide the diagnosis, but is essential to effectively reassure the patient and parents that the chest pain is not a serious problem. The pain should be confirmed as being real, but a common complaint in young people. The patients should be specifically reassured that he or she is not going to have a heart attack and that he or she is not going to die. This approach is usually rewarded with a smile of relief from both the patient and the parents.[2,7] More detailed explanation of the etiology of the chest pain depends on the specific diagnosis and the needs of the family.

Pharmacological treatment is occasionally indicated. In chest pain due to anxiety, reassurance and stress reduction are usually sufficient, but if needed, beta-blockers are effective in controlling the palpitations associated with anxiety. Anti-anxiety agents are also occasionally indicated. In most cases, at least several weeks should be allowed to observe the effectiveness of conservative treatment, prior to starting any medication. Rarely, referral for psychotherapy may be required for significant anxiety disorders.[10] In costochondritis and other chest wall pain, a prescribed course of non-steroidal anti-inflammatory agents and avoidance of the offending activity is therapeutic.

As noted, reassurance is the treatment of choice for benign pediatric chest pain, but even in obviously benign chest pain, referral to a pediatric cardiologist may occasionally be necessary to achieve this goal.

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PALPITATIONS

CHARLES A. TRANT, JR., M.D.*

Palpitations, or the sensation of some change in the cardiac rhythm, are fairly common sensations in children. Many do not require an extensive cardiac evaluation, but the appropriate concern that palpitations may represent an episode of supraventricular tachycardia (SVT), or even more important ventricular tachycardia (VT), prompts many referrals to the pediatric cardiac specialist. Cardiac consultation is indicated if the palpitations are frequent, sustained or associated with other symptoms such as chest pain, syncope or pre-syncope (Table 1). Other key features to inquire about in the history include the frequency, duration, context (e.g.- exercise, after a dose of albuterol or ingestion of caffeine), and any exacerbating or alleviating factors. Particularly important for sustained palpitations are issues of onset and termination. A sudden onset or termination is more likely to represent a true tachyarrhythmia, while a more gradual onset, and particularly termination, are more likely to be due to sinus tachycardia. Although a number of types of SVT and VT are more likely to occur during the catecholamine surge associated with anxiety or exercise, these factors are most likely to cause sinus tachycardia, particularly if the termination is gradual. A subjective feeling of abnormal respirations may also be a useful historical finding. Unrecognized hyperventilation, a frequent cause of sinus tachycardia, is common in children, especially in teenagers. The patient may describe a sensation of having difficulty with inhalation, but no problem with exhalation, and may not feel tachypneic despite respiratory rates far above normal. Dizziness, tingling in the extremities, and occasional peripheral cramping are associated findings.

Most patients or families cannot provide a pulse rate from the palpitation episodes; however, if the pulse rate is known, it is clearly an important historical point, since rate alone may be diagnostic. Sustained SVT and VT in children rarely have a rate below 200 beats/minute, whereas sinus tachycardia frequently approaches 200 beats/minute for short periods, particularly in smaller children during activity. Rates of 120-150 beats/minute are very common in children of all ages. Since some SVTs and VTs are slower, a conservative rate cut-off for concern is about 150 beats/minute resting, in children over six years of age, and 180 beats/minute for younger children. As noted above, sustaining such a rate despite rest is the most important historical finding. For SVT, a history of a pulse which was "too fast to count" is common, and should prompt referral.

The family history is often not helpful, but because arrhythmias are common with aging, frequently there is a history of an arrhythmia in a close relative. It is important to differentiate such findings from familial diseases, such as long QT syndrome, arrhythmogenic right ventricular dysplasia, arrhythmias with hypertrophic cardiomyopathy, and the occasional family with genetically transmitted Wolff-Parkinson-White (WPW) syndrome. A family history of sudden unexplained death at an age less than 50 years should always be investigated further. Inquiring about other recent cardiac disease in family members may be helpful at uncovering the role of anxiety in a child concerned about a close relative's event, but too young to understand it.

Evaluation. The physical exam is frequently normal. If an arrhythmia is noted, the pattern and frequency are important. Is the basic rhythm regular, regularly irregular, or irregularly irregular? Are the irregular beats early or late? Are they isolated beats, or is there a pattern such as bigeminy or trigeminy? The initial work-up need not be extensive. Most important after the history and physical exam is documenting the rhythm with an electrocardiographic rhythm strip and a 12-lead ECG. This test can be performed in virtually any location where the equipment is available, but the interpretation should be done by a pediatric cardiac specialist. Each of the four centers in the Children's Heart Program has a physician on call 24 hours a

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Worrisome Signs	Less worrisome signs
Sudden onset / sudden termination	Gradual onset / gradual termination
Syncope, dizziness, or chest pain	No associated symptoms
No history of hyperventilation	History of hyperventilation
Arrhythmia on exam	Normal exam
Arrhythmia does not vary with respiration	Arrhythmia varies with respiration (sinus arrhythmia)
Abnormal ECG	Normal ECG

Table 1. Worrisome Signs and Less Worrisome Signs

day and fax facilities to receive ECG's. The normal values vary with the age, and there are several features of pediatric ECGs that can appear very abnormal by adult standards, but may be quite normal, and visa versa. Some very important findings, such as a delta wave in WPW, can be very subtle in children due to relatively enhanced AV node conduction. Unfortunately, with episodic arrhythmias in the absence of WPW, the ECG is almost always normal. Marked sinus arrhythmia is a common ECG finding in children between six and 21 years, and may be associated with a history of an irregular pulse detected by a physician or family member; however, the irregularity is almost never noted by the patient and never felt as palpitations. If sinus arrhythmia explains a noted irregularity, no further evaluation may be needed. If there is another arrhythmia, or if the ECG is normal but the history or exam is suspicious, then further testing and referrral to a pediatric cardiology may be indicated.

For symptoms which cannot be explained as sinus tachycardia or sinus arrhythmia, or documented by the resting ECG, a more extensive workup is required. The next step is to attempt to capture the rhythm during symptoms. The Holter monitor had been the test of choice in the past, but for infrequent palpitations, was usually normal. The development of the event monitor has made the evaluation much easier. Event monitors fall into two broad categories. Both types are triggered by pushing a button when an event occurs, but one called "memory looping" is worn continuously and allows capture of events preceding the pushing of the button, while the other type is placed on the body during symptoms and only captures the ECG after the button is pushed. After the patient or family member records the rhythm, the information is transmitted over the phone and the rhythm strip transferred to the physician for interpretation. These devices can be very helpful both for diagnosing an abnormal rhythm during these intermittent events and in reassuring patients whose rhythm is normal during their events. The main drawbacks to these monitors are that the patient must be able to push the button or at least communicate that there is a change in rhythm, and that the monitors must often be worn or carried about for long periods of weeks to months, a feat which is beyond the capacity of most children or adolescents. Therefore, infants with possible arrhythmias and very infrequent events present diagnostic challenges. Other non-invasive diagnostic tests that may be helpful include echocardiography and exercise stress testing, depending on the circumstances of the palpitations or other findings.

When sustained palpitations persist, but cannot be diagnosed by continuous or intermittent monitoring, a semi-invasive electrophysiology (EP) study performed with an esophageal pacing and recording lead may be very helpful to induce and document many forms of paroxysmal SVT. An invasive EP study for diagnosis alone is only indicated in pediatric patients when one of the following is true: 1) VT is suspected from non-invasive testing; 2) syncope was present with the palpitations; 3) the palpitations occurred in the setting of repaired congenital heart disease, or the most infrequent; 4) sustained palpitations cannot be diagnosed by any other tests.

Abnormalities of cardiac rhythm typically fall into one of two categories: disorders of impulse initiation and disorders of impulse conduction. Disorders of impulse initiation include premature atrial contractions, premature ventricular contractions, and sustained ectopic tachyarrhythmias. Disorders of impulse conduction include the reentry forms of tachycardia, such as the more common forms of SVT, atrial flutter and fibrillation, and many forms of VT, as well as all three levels of AV block. The details of these arrhythmias, as well as the treatment choices, are covered in other articles in this issue and elsewhere.

In conclusion, palpitations are a common complaint in the pediatric population. The work-up includes a detailed history and pertinent physical exam. An ECG should always be performed and should be interpreted by a qualified pediatric cardiologists. Further non-invasive testing is often indicated to document the rhythm during symptoms. In selected patients the work-up may be quite extensive.

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SYNCOPE: ETIOLOGY, MANAGEMENT, AND WHEN TO REFER

J. PHILIP SAUL, M.D.*

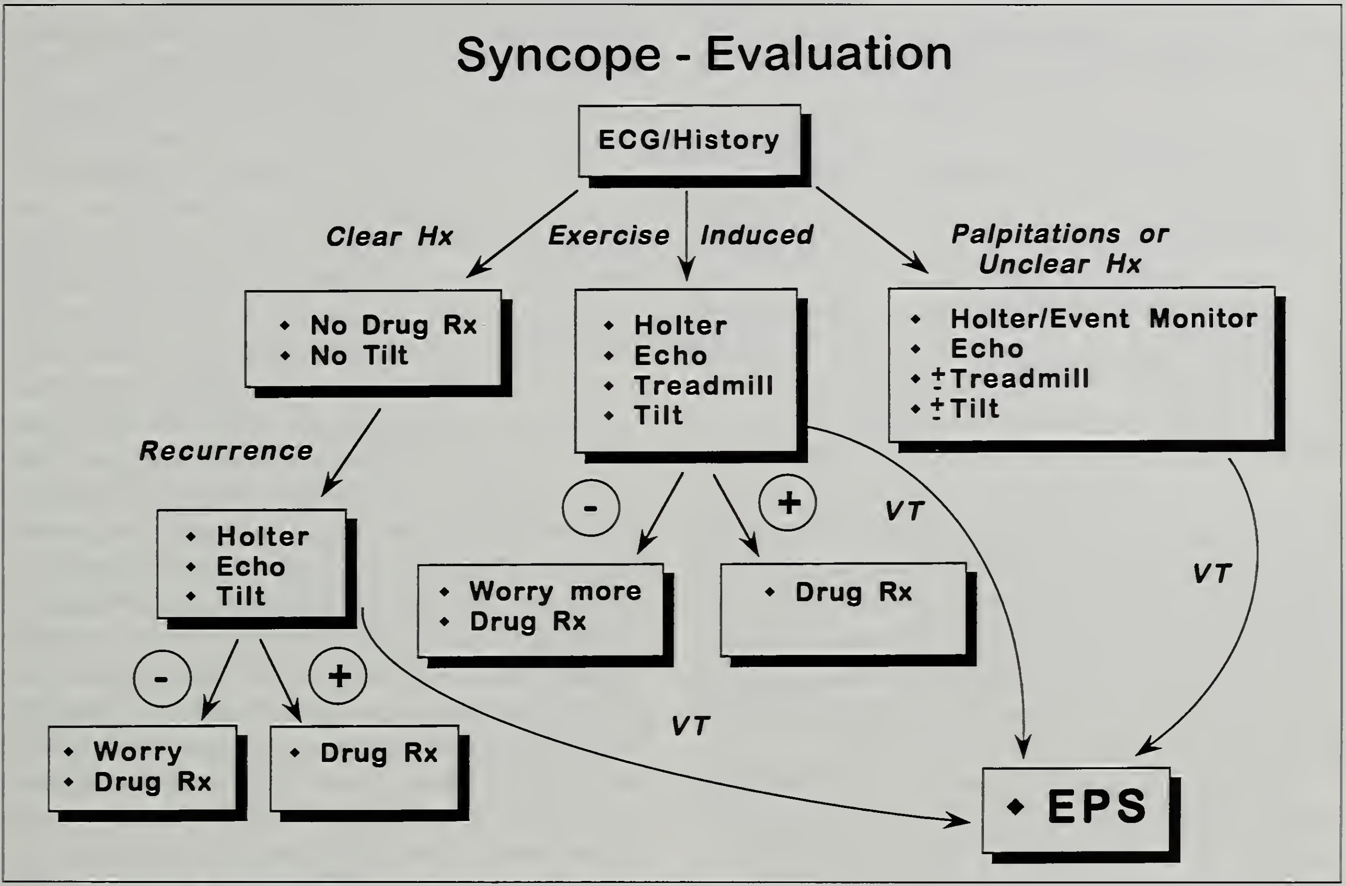

Figure 1. Syncope - Evaluation

Syncope can be defined as a temporary loss of consciousness and postural tone secondary to a lack of adequate cerebral blood perfusion. Clearly, this definition excludes loss of consciousness due to neurologic causes, such as atonic seizures or basilar migraines, but these conditions can be eventually differentiated from true syncope by the presence of a strong pulse during the period of unconsciousness. In addition, these causes are rare in the pediatric age group.[1] Although syncope is most often due to a benign abnormality of blood pressure control, even pediatricians must worry about it, because occasionally it is due to a malignant cardiac rhythm disorder.[1] To complicate matters, syncope is extremely common, with as many as 15 percent of children experiencing a single episode before age 18. In addition, a large number of toddlers, five percent in one study [2], undergo a similar syndrome, commonly called "breath-holding spells," during or after a mildly traumatic event or tantrum.

A great variety of terms, including simple faint, vasovagal, vasodepressor, and neurocardiogenic syncope have been applied to the commonly observed event of transient loss of consciousness in a person believed to be otherwise healthy. The circumstances surrounding these events often include a recent change in posture, prolonged standing in a single position, a warm environment, pain, the sight of blood, emotional stress, or intense exercise. Standing in church is often a stimulus by combining many of these factors. Patients may feel weak, dizzy and diaphoretic just prior to the event, and they usually regain consciousness within a few moments of reaching a horizontal position. Because the precise mechanism of these spells has not been defined and may be variable, we have chosen to group all of them under the term "neurally mediated" syncope or presyncope. Over the last five years, much has been learned about the more common forms of neurally mediated syncope. Probably the most important breakthroughs have been derived from a simple diagnostic test, the tilt test, which is able to reproduce the clinical symptoms in as many as 80 percent of patients with a good history. Its use will be discussed below.

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Non-Pharmacologic Rx	**Pharmacologic Rx**
• Super-hydration (normal salt diet) **• Recognition** **• Anti-gravity maneuvers** **• Leg crossing** **• Abdominal contraction** **• Leg on stool** **• Squatting/knee-chest** **• Lying supine**	**• α-fludrocortisone** **• beta-blockade** **• α-agonists pseudoephedrine** **midodrine** **• disopyramide** **• serotonin reuptake inhibitors**

Table 1. Therapy for Neurally Mediated Syncope

Neurally Mediated Syncope - Mechanism. Based on physiological research in humans and animals, as well as clinical data, the mechanism proposed for this most common form of syncope begins with a normal shift in central venous volume from the thorax to the lower extremities during a change to upright posture. This shift results in deactivation of the volume receptors in the atria and ventricles, reflexively leading to an increase in sympathetic activity to the heart and periphery. Most of the time, this increase in sympathetic activity restores blood pressure equilibrium by increasing heart rate and contractility, and producing venous and arterial vasoconstriction; however, occasionally the increased left ventricular contractility appears to paradoxically activate ventricular mechanoreceptors (C-fibers) whose central reflex arc is designed to prevent hypertension. The central neural response leads to a sudden withdrawal of peripheral sympathetic activity in the face of the fairly marked physiological stress already present. The result is a sudden decrease in ventricular filling, arterial resistance, and heart rate, all producing hypotension and syncope.

Evaluation (Figure 1). Even with the use of tilt-testing, there is little doubt that the most important part of the work-up is the history and a basic physical exam. There are several critical points, the first of which is the presence or absence of congenital, structural or functional heart disease. If any of these are known to be present or signs of heart failure are seen on physical exam, neurally mediated syncope becomes a diagnosis of exclusion. Otherwise, one should probe for the typical findings of benign syncope: precipitating factors as described above, a history of a recent viral illness, or a history of migraines.[1] An immediate family history of syncope without sudden death is also found in around 90 percent of pediatric patients presenting with syncope.[3] Clinical features of the syncopal event which help differentiate benign vs. potentially malignant causes of syncope include: 1) gradual onset of presyncope with paleness, diaphoresis and nausea **vs.** sudden onset; 2) no palpitations before the event **vs.** palpitations; and 3) post-syncopal lethargy **vs.** rapid resolution, respectively. The one test which should probably always be performed is an ECG which can rule out or markedly decrease the likelihood of many of the most worrisome diagnoses: WPW syndrome, long QT syndrome, other familial arrhythmias, heart block, arrhythmogenic RV dysplasia, and hypertrophic cardiomyopathy. Other tests such as an echocardiogram, which can rule out dilated cardiomyopathy, a Holter, or a tilt test are probably not very useful unless the history is unclear, the symptoms occur during exercise, palpitations were noted before the event, or there are recurrences after initial therapy (Figure 1).[4] Finally, in pediatric patients, an intracardiac electrophysiologic study (EPS) with biopsy and coronary evaluation is reserved for patients with structural or functional heart disease or documented primary arrhythmias (Figure 1). Since coronary abnormalities do very rarely underlie syncope in children, a nuclear stress test may also ocassionally be useful in specific circumstances.

Tilt Test. This test can be extremely useful to confirm a suspected neurally mediated diagnosis, demonstrate for the patient what the symptoms represent, or test the effectiveness of therapy, but because of false negatives and positives[5], it should probably not be included in the routine work-up of most patients (Figure 1). There are many tilt methodologies. We use a 60-degree head-up tilt for a period of twelve minutes, which may be repeated with an infusion of isoproterenol at 0.04 mcg/kg/minute. Heart rate, respiration and non-invasive finger arterial pressure (Finapres,Ohmeda) are monitored continuously. Three different syncopal responses may be seen: 1) hypotension without any significant change in heart rate (vasodepressor); 2) bradycardia or asystole producing hypotension (cardioinhibitory); and 3) initial hypotension followed by a subsequent decrease in heart rate which leads to more severe hypotension. Somewhat in contrast to the typical view that these spells are "vagal," the most common responses observed are numbers 1 and 3, both of which begin with peripheral vasodilation.

Therapy. Only therapy for neurally mediated syncope or presyncope will be discussed here, since all other cases will be diagnosis specific. For the vast majority of patients who have a clear history, the triad of non-pharmacologic therapy listed in Table 1 is almost always adequate, particularly for patients old enough to recognize the onset of presyncope. To achieve what I have termed "super-hydration," I recommend drinking enough salty or sweet liquid without caffeine to produce colorless urine, at a frequency of twice in the morning and twice in the afternoon, rather than recommending a particular volume of intake which is difficult to maintain. It is not generally necessary to recommend increased salt intake, but it is important to rule out salt avoidance by the patient or family, and to use at least a "salt added to cooking" diet. "Recognition" refers to the earliest presyncope, and the "anti-gravity maneuvers," which can be immensely effective (I recommend trying them when dizzy), came directly from a severely symptomatic patient of a Dutch physician, Dr. Wouter Wieling's, who had autonomic failure.[6]

Pharmacologic therapy should be reserved as in Figure 1, or for patients with continued presyncope despite nonpharmacologic therapy. Choices include the mineralocorticoid α-fludrocortisone (Florinef, Apothecon) to increase blood volume, β-adrenergic blockers to prevent cardiac sympathetic activation, and α-agonists, such as midodrine (ProAmitine, Roberts) to prevent the initial central volume drop and constrict arterioles. One unexpected, highly successful therapy has been the Class I antiarrhythmic agent disopyramide (Norpace), whose negative inotropic, anti-cholinergic and vasoconstrictive side effects sometimes produce dramatic improvement in the most severe cases.

Summary. An abnormality of blood pressure control is by far the most likely cause of syncope in children; however, syncope in children may be due to primary cardiac dysrhythmias, particularly in the presence of structural heart disease. An appropriate work-up should include an ECG with a 60-second rhythm strip at first presentation. Tilt testing can usually wait until after a second occurrence on non-pharmacologic therapy. Patients who require more than a history and ECG by the algorithm in the Figure should probably be referred to a cardiologist familiar with the evaluation of syncope. The common form of neurally mediated syncope is also probably related to both breath-holding spells in toddlers[2], and to many of the cases of chronic fatigue syndrome.[7]

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SPORTS PARTICIPATION AND CARDIOVASCULAR SCREENING

R. AUSTIN RAUNIKAR, M.D.*

The preparticipation exam has become an integral part of adolescent sports participation. It may be the only well-child assessment many youths will have. The primary objective of the preparticipation exam is to detect conditions that predispose to injury and that may be life-threatening or disabling.[1] Secondary objectives of the preparticipation exam are to determine general health, provide counsel regarding individual health-related issues, and assess physical qualification for a specific sport.[1]

The preparticipation exam should strive to identify cardiovascular conditions that may lead to injury or death during sports participation. The most common causes of sudden cardiac death include hypertrophic cardiomyopathy, Marfan syndrome (aortic dissection), premature atherosclerosis, and coronary artery anomalies.[2,3] Rarer cardiac causes include arrhythmia, congenital heart disease, and acquired heart disease such as myocarditis.[3] The exam should also determine general cardiovascular health, provide sports-specific counseling for the athlete with cardiovascular abnormalities, and when necessary, facilitate further consultation and management of cardiovascular concerns.[4]

The key components of the preparticipation exam are a careful history and thorough physical exam.[1,4,5] The history focuses on past medical history, current review of systems, family history, and current drug usage. It is ideal to have the parent and athlete participate in answering the history and to review the answers with them to ensure the greatest accuracy possible. The physician should ask pertinent questions not addressed satisfactorily by the health questionnaire.

Pertinent past cardiovascular history questions include: Have you ever been dizzy, passed out, felt short of breath, or had chest pain during or after exercise? Have you ever had your heart beat too fast, too slow, or irregularly for any given activity or at rest? Have you ever had your heart evaluated by a cardiologist? Has your cholesterol ever been tested? Do you tire more easily than your friends? Have you had a severe viral infection in the past month? Have you ever been restricted from sports participation because of a heart problem?

Review of cardiovascular symptoms provides an adjunct to the past medical history. It should address current and recent episodes of tachypnea, dyspnea on exertion, orthopnea, chest pain, palpitations, irregular heart beat, dizziness, presyncope, syncope, and edema. The family history should primarily focus on first degree relatives. Questions for the family include: Is there any history of children in the family born with birth heart defects? Has anyone in the family died before age 50 of sudden death, heart attack, or stroke? Has anyone under age 50 had a heart rhythm problem that required a pacemaker to speed it up or medicines to slow it down? Have any family members been diagnosed with Marfan syndrome, hypertrophic cardiomyopathy, prolonged QT syndrome, hypercholesterolemia, or early hypertension?

The physician should be aware of all prescription and over-the-counter drugs the athlete is using. Physicians should also identify illicit drug abuse. Cocaine and anabolic steroids in particular have been associated with sudden death. Caffeine, nicotine, and stimulants can alter blood pressure, heart rate and level of hydration. The physician can then counsel how these drugs impact long-term cardiovascular health.

General inspection of the body habitus can aid in identifying cardiovascular disorders and risk. For example, arachnodactyly, pectus excavatum, lens dislocation, and limb disproportion may suggest Marfan syndrome. Xanthomas may suggest familial hypercholesterolemia. Striae and inordinate muscle mass and definition may suggest steroid abuse. The cardiovascular component of the preparticipation physical exam can confirm, support, or refute concerns raised by the history. Accurate vital signs should include heart rate, respiratory rate, and blood pressure. Careful attention should be given to blood pressure technique. The patient should be at rest and seated. The cuff should cover two-thirds of the upper arm and wrap around its circumference one and a half times. If the pressure is elevated, it should be repeated after critique of technique and several minutes of rest. If it remains elevated, consider four extremity blood pressures and further evaluation. Skin should be assessed for color and perfusion. Cyanosis and clubbing, though rare, should be recognized. Radial and femoral pulses should be palpated and be equal without delay. Diminished or delayed femoral pulses raise concern of coarctation of the aorta. Precordial impulses should be palpated for intensity and location. Increased intensity or abnormal location may represent underlying cardiac disease. A vibration over the precordium is called a thrill and usually represents significant cardiac disease. Lung fields should be auscultated for symmetry of breath sounds, rales, rhonchi, and wheezes. Continuous murmurs in the lung fields may represent a persistent patent ductus arteriosus or other abnormal runoff. Auscultation of the heart should at least be performed in the supine and sitting positions. Rhythm should be regular. Irregular rhythms other than the normal respiratory variation of sinus arrhythmia should be investigated further.

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Careful attention should be given to the presence of a systolic click, diastolic gallop, or friction rub. A systolic click can occur with mitral valve prolapse, bicuspid aortic valve, or valvar pulmonary stenosis. The second heart sound should vary with respiration. A wide, fixed second heart sound suggests an atrial septal defect. The third (S3) and fourth (S4) heart sounds may be found in normal individuals but may represent subtle evidence of diastolic abnormality. Their presence should be correlated with the remainder of the exam. A friction rub indicates pericardial inflammation.

Murmurs may be normal or pathologic (Figure 1), which can often be determined by careful assessment of the murmur's location, timing in the cardiac cycle, referral of sound, change with altered body position, and correlation with the remainder of the cardiovascular exam. Holosystolic, diastolic decrescendo, mid-diastolic murmurs, and systolic murmurs greater than 2/6 intensity warrant further investigation. And if in doubt, consultation is appropriate. A systolic murmur at the upper right sternal border should be assessed with the patient in the standing and squatting positions. A murmur of hypertrophic (dynamic) stenosis at this location will increase as intracardiac volume decreases - such as with standing or a Valsalva maneuver in the supine position. The murmur of valvar or discrete subvalvar (fixed) stenosis will increase as intracardiac volume increases - such as moving from standing to sitting to squatting positions, and decrease in the standing position or with a Valsalva maneuver.

Electrocardiograms, chest x-rays, echocardiograms, holter monitors, and treadmill stress tests are not part of the screening preparticipation exam. They are neither cost-effective nor "diagnosis-effective," independent of a careful and thorough history and physical exam. The exam may indicate the use of laboratory studies to confirm or refute specific cardiovascular conditions which warrant counseling, medical management, or limitation of sports participation. Echocardiograms are only as good as the technical and professional skills used to perform and interpret them, which is best done by a physician with expertise in congenital and acquired pediatric heart disease. Consultation with a cardiologist often assists judicious selection of additional appropriate tests and always aids in their interpretation. Consultation also allows counseling and management for any identified cardiovascular disorders.

The purpose of the preparticipation exam is to identify health concerns which deserve counseling, medical management, and in rare cases, sports avoidance and restriction. The preparticipation exam can recognize many cardiovascular abnormalities and patients at risk. Additional screening, counseling, and sports prescription (participation vs limitation) should be individualized to allow each young athlete to live up to his or her full safe potential.[1,4,5,6] For the athlete with acquired or congenital heart disease, this is often best done with the assistance of a specialist.

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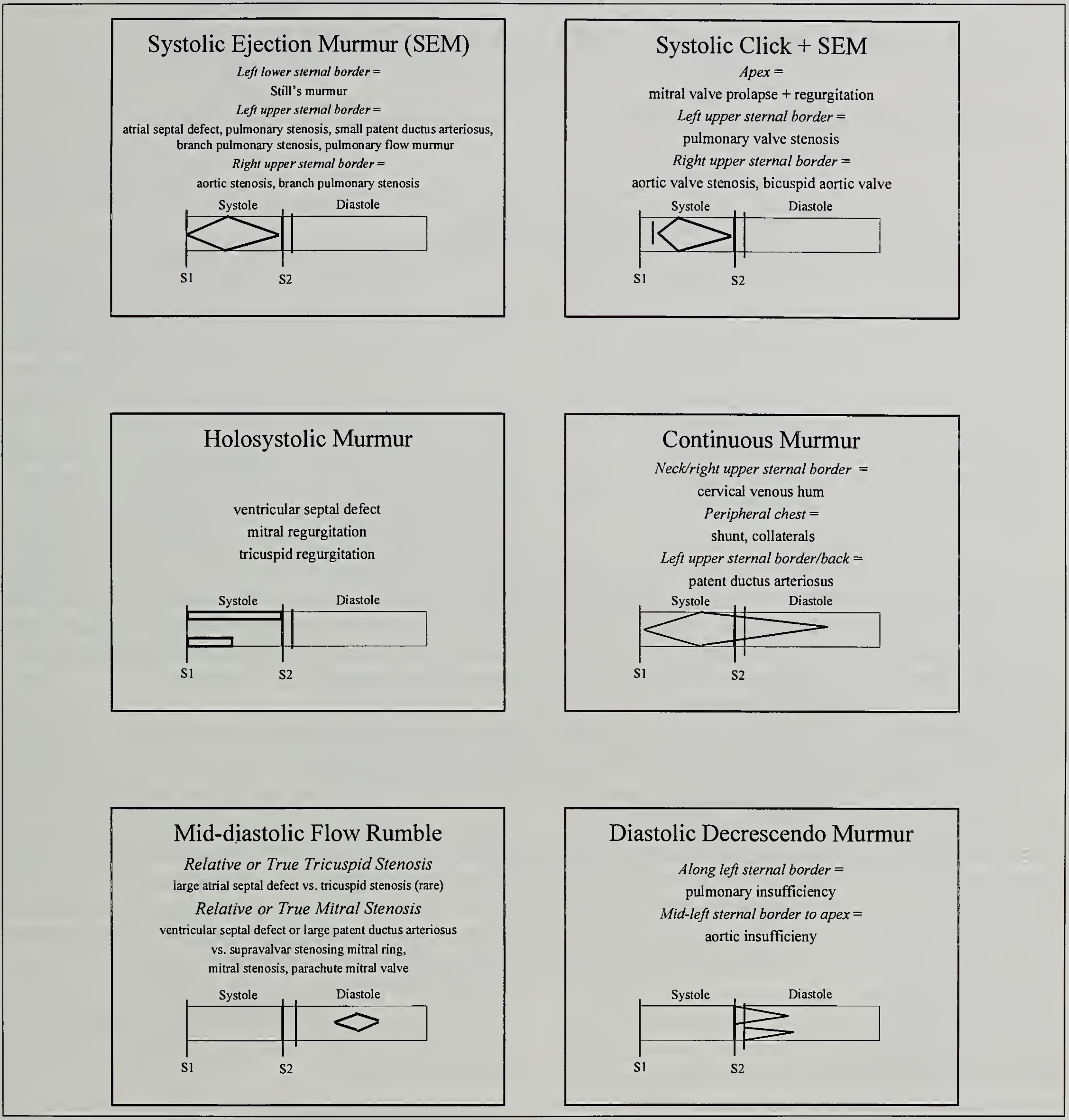

Systolic Ejection Murmur (SEM)

Left lower sternal border =
Still's murmur
Left upper sternal border =
atrial septal defect, pulmonary stenosis, small patent ductus arteriosus, branch pulmonary stenosis, pulmonary flow murmur
Right upper sternal border =
aortic stenosis, branch pulmonary stenosis

Systolic Click + SEM

Apex =
mitral valve prolapse + regurgitation
Left upper sternal border =
pulmonary valve stenosis
Right upper sternal border =
aortic valve stenosis, bicuspid aortic valve

Holosystolic Murmur

ventricular septal defect
mitral regurgitation
tricuspid regurgitation

Continuous Murmur

Neck/right upper sternal border =
cervical venous hum
Peripheral chest =
shunt, collaterals
Left upper sternal border/back =
patent ductus arteriosus

Mid-diastolic Flow Rumble

Relative or True Tricuspid Stenosis
large atrial septal defect vs. tricuspid stenosis (rare)
Relative or True Mitral Stenosis
ventricular septal defect or large patent ductus arteriosus vs. supravalvar stenosing mitral ring, mitral stenosis, parachute mitral valve

Diastolic Decrescendo Murmur

Along left sternal border =
pulmonary insufficiency
Mid-left sternal border to apex =
aortic insufficieny

Figure 1.

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ACQUIRED HEART DISEASE IN CHILDREN: KAWASAKI DISEASE AND CARDIOMYOPATHY

HENRY B. WILES, M.D.*

Kawasaki disease, described by Dr. Tomisaku Kawasaki in 1967, is an acute febrile illness of young children with a characteristic exanthematous multi-system presentation and triphasic clinical course. The etiology is not yet identified but most likely represents an infectious process which triggers a generalized immune-mediated vasculitis. The diagnosis rests on recognition of the paramount clinical features: high prolonged ($\geq$ five days) fever with four of the following five signs: cervical lymphadenopathy, oral mucosal changes, nonpurulent conjunctivitis, changes in the hands and feet, and polymorphous exanthema.

The most recent Kawasaki disease survey in Japan reported 12,531 cases for the two-year period 1995-1996. The incidence was 105/100,000 children $\leq$ five years old, 99.3 percent of cases were $\leq$ five years old; and the male/female ratio was 1.37. Of all cases, 84.8 percent were typical, 3.5 percent were atypical and 11.7 percent were suspected. Coronary artery involvement occurred in twelve percent.

The incidence in the United States is lower (six-nine/100,000 children $\leq$ five years old) which represents a different genetic population and perhaps under-reporting. With the use of gamma globulin therapy (two gm/kg as a single dose infused over 18-24 hrs), the incidence of coronary artery aneurysms has decreased from 20 percent to five percent. There appears to be an increasing number of atypical or suspected cases. Fatal consequences remain rare with an incidence of approximately 0.04 percent. The high incidence of Kawasaki disease in Japan, and the high cost and low availability of IV gamma globulin therapy have led to not all patients receiving IV gamma globulin, as they do in the United States. Thus, several algorithms are used to predict patients at high risk for developing cardiac complications. In the United States this selected treatment plan has not yet been adopted.

Any child suspected of having Kawasaki disease requires a cardiac evaluation. The evaluation should include careful auscultation, an electrocardiogram, platelet count, erythrocyte sedimentation rate (ESR), and echocardiogram at initial presentation. High dose aspirin (60-100 mg/kg/d divided Q6 hr) is used during the acute phase, with low dose aspirin (five-six mg/kg/day) used until the platelet count and ESR return to normal. An electrocardiogram and echocardiogram should be repeated at three weeks, three months and six months unless clinical indications require more frequent monitoring. The committee of the American Heart Association which oversees therapy for Kawasaki disease published a table for the long-term management of patients (see Table 1).

DILATED CARDIOMYOPATHY

Dilated cardiomyopathy, characterized by ventricular dilation, systolic dysfunction, and signs of congestion, remains a rare but serious disease in children. There are many known etiologies (Table 2), but for most cases, a specific cause is not identified. When all cases treated by the Children's Heart Program of South Carolina (CHP-SC) are considered, approximately 1/3 resolve, 1/3 have continued dysfunction and 1/3 die. Aggressive anticongestive medical therapy does appear to improve short-term outcome. Current medical therapy includes:

- Inotropes (digoxin)
- Diuretics (furosemide, spironolactone)
- Afterload reducers (ACE inhibitors)
- Beta blockers (carvedilol)
- anticoagulants (aspirin, warfarin)
- anti-inflammatory drugs (steroids, gamma globulin)

The use of immune-modulators (steroids or immunoglobulin) is still of unproven benefit, but remains a potential therapy. Heart transplantation is

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Table 1. Recommendations

Risk level	Pharmacologic therapy	Physical activity	Follow-up and diagnostic testing	Invasive testing
1. No coronary artery changes at any stage of illness	None beyond initial 6 to 8 weeks	No restrictions beyond initial 6 to 8 weeks	None beyond first year unless cardiac disease suspected	None recommended
2. Transient coronary artery ectasia that disappears during acute illness	None beyond initial 6 to 8 weeks	No restrictions beyond initial 6 to 8 weeks	None beyond first year unless cardiac disease suspected. Physician may choose to see patient at 3- to 5-year intervals.	None recommended
3. Small to medium solitary coronary artery aneurysm	3 to 5 mg/kg aspirin per day, at least until abnormalities resolve	For patients in first decade of life, no restriction beyond initial 6 to 8 weeks. For patients in second decade, physical activity guided by stress testing every other year. Competitive contact athletics with endurance training discouraged.	Annual follow-up with echocardiogram ± electrocardiogram in first decade of life.	Angiography, if stress testing or echocardiography suggests stenosis.
4. One or more giant coronary artery aneurysms, without obstruction	Long-term aspirin (3 to 5 mg/kg per day) ± warfarin	For patients in first decade of life, no restriction beyond initial 6 to 8 weeks. For patients in second decade, annual stress testing guides recommendations. Strenuous athletics are strongly discouraged. If stress test rules out ischemia, noncontact recreational sports allowed.	Annual follow-up with echocardiogram ± electrocardiogram ± chest x-ray ± additional electrocardiogram at 6-month intervals. For patients in first decade of life, pharmacologic stress testing should be considered.	Angiography, if stress testing or echocardiography suggests stenosis. Elective catheterization may be done in certain circumstances.
5. Coronary artery obstruction	Long-term aspirin (3 to 5 mg/kg per day) ± warfarin. Use of calcium channel blockers should be considered to reduce myocardial oxygen consumption.	Contact sports, isometrics, and weight training should be avoided. Other physical activity recommendations guided by outcome of stress testing or myocardial perfusion scan.	Echocardiogram and electrocardiogram at 6-month intervals and annual Holter and stress testing.	Angiography recommended for some patients to aid in selecting therapeutic options. Repeat angiography with new-onset or worsening ischemia.

± indicates with or without.

Adapted from: Dajani AS, Taubert KA, Takahashi M, et al: Guidelines for long-term management of patients with Kawasaki disease. Report from the Committee on Rheumatic Fever, Endocarditis, and Kawasaki Disease, Council on Cardiovascular Disease in the Young, American Heart Association. Circulation 1994;89:920.

Table 1. Recommendations for Long-term Management of Patients

Etiology of Dilated Cardiomyopathy

Idiopathic
Inflammatory
Metabolic
Genetic
Toxic
PeriPartum
Infiltrative
Hypersensitivity
Arrhythmogenic
Rheumatologic

Table 2. Etiology of Dilated Cardiomyopathy

a viable surgical therapy in those who will not recover. The timing of transplantation remains a difficult clinical dilemma. Over one year of age, dilated cardiomyopathy is the most common indication for transplantation in childhood. National results show a 75 percent two-year survival, while the CHP-SC transplant program currently has 100 percent survival.

The use of the polymerase chain reaction (PCR) technique has now substantiated the close involvement of viruses (viral myocarditis) in the development of dilated cardiomyopathy in children, and advanced molecular techniques have demonstrated that as many as 40 percent of cases may have a genetic or familial origin. From 1987 to 1998, the number of new cases of dilated cardiomyopathy in South Carolina has varied. Table 3 shows the number of children newly diagnosed by the CHP-SC.

The presentation of viral myocarditis is often subtle, beginning with upper respiratory symptoms or a flu-like illness, but soon degenerating into signs of congestive heart failure. Recognition may come at the time of a chest X-ray to rule out pneumonia. If a large heart is discovered on such an X-ray screen, immediate referral to the pediatric cardiac specialist is indicated. Cardiomyopathy on the echocardiogram usually leads to a full diagnostic catheterization for hemodynamics, coronary angiography and, most importantly, cardiac biopsy. Evidence of active inflammation on biopsy is treated with immediate steroid therapy.

Year	Number of New Cases (CHP-SC)
1987	7
1988	3
1989	4
1990	10
1991	9
1992	2
1993	6
1994	0
1995	5
1996	0
1997	4
1998	6

Table 3.

FETAL CARDIOLOGY

GIRISH S. SHIRALI, M.D.*
CAROLINE TASSEY, R.N., P.N.P.
ROGER NEWMAN, M.D.

Scenario 1: *A 3.2 kg baby is born after an uncomplicated pregnancy. The mother and neonate have an uneventful course. At one week of age, the neonate is taken to a local emergency room for tachypnea, lethargy and poor color. Evaluation reveals poor pulses and profound metabolic acidosis. A prostaglandin infusion is started, and the neonate is transferred to a tertiary center; echocardiography reveals hypoplastic left heart syndrome. The neonate's course is complicated due to multi-organ injury sustained during the initial period of hypoxemia and acidosis associated with the closure of the ductus arteriosus. The family is unprepared for the life and death issues they must confront.*

Scenario 2: *In an otherwise uncomplicated pregnancy, prenatal ultrasound reveals an abnormalfour-chamber cardiac view, prompting referral to a pediatric cardiologist. Fetal echocardiography at 20 weeks of gestation reveals hypoplastic left heart syndrome. The cardiologist explains the diagnosis and treatment options to the family. The family explores various sources of information on the subject, and decides on staged surgical repair. As the delivery date approaches, the family returns to meet with the cardiac intensivist and the cardiothoracic surgeon who will be caring for their baby, and have the opportunity to tour the intensive care unit where their baby will be cared for. Teams from cardiology and maternal-fetal medicine plan the delivery of the infant at the tertiary center. Following normal delivery, a prostaglandin infusion is begun to ensure ductal patency. After stabilization, the infant undergoes the first stage of surgical repair at five days of age.*

Until just a few years ago, the fetal diagnosis of congenital heart disease was limited and not particularly useful. Image quality was inadequate, and treatment outcomes were not very good for neonates with complex defects. Today, well-trained sonographers, maternal-fetal medicine specialists and pediatric/fetal cardiologists operate high-resolution ultrasound machines to evaluate the intricacies of intra-cardiac structure in utero as early as 18-20 weeks of gestation.[1] Innovations in diagnostic and surgical technique and in postoperative management have transformed the outlook for babies born with complex heart defects. Complex structural defects that were uniformly fatal in the recent past are now amenable to surgical correction in the neonatal period with excellent prospects for survival.[2] However, the results of neonatal surgery and intervention are linked to preoperative morbidity. Healthy neonates are probably better candidates for surgery than are those who have suffered end-organ injury.[3-4] It is in this context that the concepts of fetal diagnosis and the coordination of subsequent management of the mother and the fetus assume great importance.

INDICATIONS FOR FETAL ECHOCARDIOGRAPHY

A screening fetal ultrasound revealing abnormal heart structure, function or rhythm is the most common indication for fetal echocardiography. A history of congenital heart defects in either parent or in any siblings is associated with an increased risk of congenital heart defects in the fetus. Certain chromosomal anomalies in the fetus are associated with known cardiac defects (*e.g.*, trisomy 21 and complete atrioventricular canal defect). A maternal history of diabetes mellitus is associated with asymmetric septal hypertrophy and an increased incidence of structural heart defects (particularly ventricular septal defects and transposition of the great arteries). Maternal systemic lupus erythema-

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* Address correspondence to Dr. Shirali at Division of Pediatric Cardiology, MUSC, 165 Ashley Ave., P.O. Box 250915, Charleston, SC 29425.

tosus is associated with complete heart block in the fetus. Maternal ingestion of certain drugs during pregnancy may be associated with specific structural defects (*e.g.*, maternal lithium ingestion is associated with Ebstein's anomaly in the fetus). Finally, non-immune fetal hydrops may be due to structural heart defects or fetal arrhythmia.

ADVANTAGES OF FETAL DIAGNOSIS

The greatest direct benefit of fetal diagnosis may involve fetal arrhythmias, which can be successfully treated in utero. When fetuses are diagnosed with structural defects, communication between the cardiologist, maternal-fetal medicine specialist and referring obstetrician results in improved coordination and continuity of care of the mother and the fetus. The family has the time to marshall their emotional resources, educate themselves, consider the treatment options, and to prepare for the neonatal surgery that is associated with real risk. Planned delivery at a tertiary center enables in-utero fetal transport,[3] which is safer and less stressful for the neonate than is ex-utero transport. Coordinated multi-specialty care is of particular importance for families who have a fetus with multiple congenital malformations or chromosomal anomalies.

LIMITATIONS AND CHALLENGES

While the resolution of ultrasound equipment today is unsurpassed, fetal diagnosis still has its limitations. Accurate delineation of extracardiac vascular structures (systemic and pulmonary arteries and veins) is beyond the scope of the technique today, and awaits further technologic advances. Reimbursements are not commensurate with the time-consuming effort required for coordination of services. Finally, insurance coverage usually does not include the cost of accommodations for the family, thus adding the threat of greater financial burdens at a time when families need all the support they can get.

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ADULTS WITH CONGENITAL HEART DISEASE

ASHBY B. TAYLOR, M.D.*
JOHN P. MATTHEWS, JR., M.D.
LESLIE W. SHELTON, JR., M.D.

In the early 1990s, the American Heart Association presented data to emphasize the growing population of adults with congenital heart disease. At that time it was estimated that there were approximately 500,000 adult patients in the United States with some form of congenital cardiac malformation. Since the South Carolina population represents approximately 1.4 percent of the U.S. population, there should be at least 5,500 adult congenital cardiac patients in the state of South Carolina. Because of past surgical successes, this special group of patients is rapidly increasing in numbers and complexity, and will need specialized care centers to provide congenital cardiology and other support services.

SOUTH CAROLINA ADULT CONGENITAL CARDIAC POPULATION

One might estimate that natural survival into adult life of patients born with congenital heart disease might be as high as 30 percent. The advent of cardiopulmonary bypass forty years ago has dramatically improved the survival and life expectancy of many of these patients. With phenomenal surgical advances, the current survival rate of congenital cardiac patients is approaching 90 percent.

Over the last 50 years the birth rate in South Carolina has remained remarkably consistent at approximately 50,000 live births per year. Presumably the incidence of congenital cardiac malformations has also been relatively constant at approximately one percent of all live births. Therefore, one would estimate that in South Carolina there are 500 patients born each year (5,000 each decade) with some form of congenital cardiac malformation. From these basic statistics, one could also begin to estimate the number of surviving congenital cardiac patients in the state of South Carolina who are now 20 to 50 years of age (Table 1). If the 5,000 patients with congenital cardiac malformations born in the decade of the fifties (before cardiopulmonary bypass) had an estimated survival of 30 percent, they would yield approximately 1,500 patients who are now 40 to 50 years of age. If survival for patients born in subsequent decades is assumed to be 50 percent for the sixties and 70 percent for the seventies, the estimated total number of congenital cardiac patients in South Carolina greater than 20 years of age at the present time would be 7,500. With improved survival over the last 20 years to approximately 80 percent and then 90 percent for each decade (Table 1), it is very clear that the number of adults with congenital disease who are alive will rapidly increase. From these estimates, it appears that over the next ten years another 4,000 patients will be added to the current 7,500 adult patients who are alive with congenital cardiac defects.

CONGENITAL CARDIAC LESIONS IN ADULT PATIENTS

Adult patients with congenital heart disease are in fact survivors. One group of "natural survivors" is unrepaired, some with relatively minor defects, and others with irreversible conditions that are now inoperable. The other group of survivors are those who have undergone a surgical procedure, some who have only palliative procedures, while others have had a full physiological repair. Because of common late postoperative problems, in particular arrhythmias, none of the operated patients should be considered "cured," with the possible exception of the most simple extracardiac procedures, such as ligation of a patent ductus or end-to-end anastomosis of some aortic coarctations.

Classification of congenital heart disease was beautifully described in a very functional manner by Maude E. Abbott in her *Atlas of Congenital Car-*

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Table 1.

Congenital Heart Disease in South Carolina			
Decade of Birth	**Current Age (yrs)**	**% Survival**	**# Adults (> 20 yrs)**
1950-1959	**40-50**	**30%**	**1,500**
1960-1969	**30-40**	**50%**	**2,500**
1970-1979	**20-30**	**70%**	**3,500**
1980-1989	**10-20**	**80%**	4,000
1990-1999	**0-10**	**90%**	4,500

Bold – current. Not bold – expected to be adults.

Table 2.

Abbott Classification of Congenital Heart Disease
(Order based on degree of saturation and duration of life)

I No venous-arterial connection (strain on right or left ventricle)
II Venous-arterial connection with possible "Terminal reversal" (Cyanose Tardive)
III Venous-arterial connection with "Morbus Coeruleus" (Maladie bleu, cyanosis)

Table 3.

Congenital Heart Disease Survival	
Abbott I and II Defects with expected survival to adulthood	**Abbott III** Defects without expected in the absence of surgery
Aortic stenosis	Tetralogy of Fallot
Pulmonic stenosis	Transposition of the great arteries
Coarctation of the aorta	Truncus arteriosus
Atrial septal defect	Single ventricle
Ventricular septal defect	
Patent ductus arteriosus	

diac Disease published by the American Heart Association in 1936. The Abbott classification is based upon the degree of desaturation and the projected duration of life (Table 2 and 3). Most patients with "no venous - arterial connection" could be expected to survive into adult life without surgical intervention. This group of patients is represented by those with simple obstructive lesions such as pulmonary stenosis, aortic stenosis or coarctation of the aorta. According to Abbott's classification, those with "venous-arterial connection with possible *terminal reversal*" likewise could be expected to survive into childhood and some into adult life. These patients are best illustrated with lesions such as atrial septal defect, patent ductus and ventricular septal defect. Those patients with "venous-arterial connection with *morbus coeruleus*" (cyanosis) are not expected to survive much beyond birth and/or early childhood. Patients in this category might be the formerly known "blue baby" represented by D-transposition of the great arteries and tetralogy of Fallot.

The introduction of cardiopulmonary bypass and the subsequent dramatic surgical advances over the last 40 years have greatly altered the survival and well-being of patients born with congenital heart disease (Table 3). Most of the defects listed in Abbott's classification I and II benefit from surgery with a long and more problem-free life. Those from Abbott III did not survive infancy and therefore have been salvaged by surgical intervention.

The dramatic change in total survival in the eighties and nineties has been the result of surgical palliation and then subsequent physiologic repair of patients with single ventricle. Even a large number of these patients are currently approaching or have reached adulthood. They are a very complex group of patients whose common expression is their functional single ventricle. The category includes patients with tricuspid atresia, pulmonary valve atresia with hypoplastic right ventricle, complex single ventricle, and hypoplastic left heart syndrome patients who have been palliated with a Norwood procedure. The goal in these patients is to ultimately achieve physiologic repair with the Fontan procedure which provides a direct connection between the systemic venous return and the pulmonary arteries without an intervening ventricle. The Fontan has resulted in dramatic improvement of both survival and life style; however, these patients bring a multitude of other cardiac problems into their adult life.

SPECIAL PROBLEMS

Adult patients with congenital cardiac disease, whether natural survivors or surgical survivors, palliated or physiologically repaired, represent a complex group of patients. Socio-economically they are often shunned from life insurance and health insurance, not given an opportunity for equal employment and in most cases do not have access to specialized congenital cardiology cardiac care. In addition, the adult female patient requires special consideration with respect to birth control and pregnancy. In some conditions pregnancy should be avoided completely and in others it may be undertaken with special caution. Both male and female adult congenital cardiac patients will benefit from appropriate genetic counseling, particularly as our knowledge in this area expands in the coming years.

CARDIAC CARE

Like any other patients, adult patients with congenital heart disease require the benefits of standardized health care, but they also must have available to them special care with respect to their cardiac problem. Those physicians providing this special care must have expertise and knowledge in the anatomy and physiology of the great variety of congenital cardiac defects, and the surgery that has been performed on these patients. Such physicians represent an "unrecognized subspecialty" that might appropriately be referred to as "Congenital Cardiology" that focuses on the problem regardless of age. Proper care of these patients should be delivered in a comprehensive fashion that provides consultative services under the direction of a congenital cardiologist but in association with adult cardiologists, family practitioners, internists, obstetricians, genetic counselors, social workers and financial advisors.

RESOURCES FOR FAMILIES OF CHILDREN WITH CONGENITAL HEART DISORDERS

CAROLINE TASSEY, R.N., P.N.P.*

The diagnosis of a child with a serious congenital heart defect is always a tremendous emotional stress, and can be a multi-factorial crisis that affects the entire family. The family may lack human and financial resources, which adds to the emotional burden, particularly if hospitalization and interventions such as cardiac surgery are needed. Although most families cope well, access to sources of emotional support, guidance and community resources increases the likelihood that the family will cope successfully. Following is a selection of books, videos, support groups and web sites which may be useful for families dealing with a child who has congenital heart disease. Information on how to access them is also included.

BOOKS AND VIDEOS FOR FAMILIES

The Heart of a Child: What Families Need to Know about Heart Disorders in Children. Neill CA, Clark EB, Clark C (1992) Johns Hopkins University Press, Baltimore
Written for the lay reader; uses many case examples and illustrations. This book can be obtained through local book stores.

"If Your Child has A Congenital Heart Defect" (available in English and Spanish) ***"Feeding Infants with Congenital Heart Disease"***
These pamphlets are inexpensive and can be obtained from the American Heart Association.

The feeding pamphlet was rewritten by experienced pediatric cardiology nurses in 1997. Subacute bacterial endocarditis (SBE) prophylaxis wallet cards can also be obtained from the AHA.

For Parents and Caregivers: Your Child in the Hospital
What About Me? When Brothers and Sisters Get Sick (reading level grade 3-6) Families can obtain these books from: Association for the Care of Children's Health, 7910 Woodmont Avenue, Suite 300, Bethesda MD 20814; (301) 654-6549, acch@clark.net.

Other books for children with heart defects and their siblings include: ***Cardiac Kids***; ***Your Visit to the Heart Doctor***; ***There are Some Things More Important than Baseball***; and ***Heart Smart***. All are grade 3-6 reading level and are available from:
Dayton Area Heart & Cancer Association
120 Ziegler St; Dayton OH 45402; (937) 223-4117.

Many programs and surgical centers have their own booklets, videos, and web sites for families. The Children's Heart Program has several videos that may be lent to families, including ***Teddy Bear's Trip to the Cath Lab.*** This one and others can be obtained through the author Caroline Tassey at the address for correspondence in this article or at 1-800-343-1983.

SUPPORT GROUPS AND WEB SITES

CHASER (Congenital Heart Anomalies, Support, Education and Research) is a national support group for families of children with congenital heart disease. They publish a regular newsletter, hold educational meetings and "match" parents. They also have a web site at www.csun.edu/~hfmth006/chaser and can be reached via e-mail at chaser@compuserve.com.

Pediheart is another website for families . Pediheart also has a professional website where health care professionals who manage children and adults with congenital heart disease can share information and seek advice. The web site address is www.pediheart.org.

The Children's Heart Program (www.pediatrics.musc.edu/pedscard) has our own parent support group, ***Heart to Heart***. The group meets weekly on Friday mornings at the MUSC

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* Address correspondence to Ms. Tassey at MUSC, 165 Ashley Ave., P.O. Box 250915, Charleston, SC 29425.

Children's Hospital in Charleston. Meetings include a short educational component on topics requested by families. Recent topics have been *"Helping your Child with Painful Procedures"* and *"Coping with Hospitalization—Supporting your Family."* Meetings are open to parents of both inpatients and outpatients. The group is currently facilitated by Robin Ohlinger RN, MSN, who can be reached at (843) 792-5481 or ohlingtb@musc.edu.

Several national support groups for individuals with syndromes commonly associated with congenital heart problems. Most have newsletters and educational materials.

CHARGE Syndrome Foundation
2004 Parkade Blvd
Columbia, MD 65202
(800) 422-7604
www.chargesyndrome.org

SADS Sudden Arrhythmia Death Syndrome Foundation
(Long QT syndrome)
508 E South Temple, Suite 20
Salt Lake City, UT 84102
(800) 786-7723
www.sads.org

National Marfan Foundation
382 Main St. Port Washington, NY 11050
(518) 883-8712
www.marfan.org

TNSSG Noonan Syndrome Support Group
PO Box 145 Upperco, MD 21155
(888) 686-2224
www.noonansyndrome.org

Turner Syndrome Society of the US
1313 SE 5th St. Suite 327
Minneapolis, MN 55414
(800) 365-9944
www.turner-syndrome.org

Williams Syndrome Association
PO Box 297
Clawson, MI 48017
(241) 541-3630
www.williams-syndrome.org

PARENT-TO-PARENT PROGRAMS

Parent-to-Parent programs provide informational and emotional support to parents and provide matches with "veteran" parents who offer individualized support. Parent training and information programs can help parents communicate more effectively with professionals, participate in the educational planning process and better understand their children's specific needs. Two options are:

Family Connection of South Carolina
2712 Middleburg Drive Suite 103B
Columbia, SC 29204
(800) 578-8750
Contact: Connie Ginsberg
famcom@mindspring.com

PRO-Parents
2712 Middleburg Drive Suite 102
Columbia, SC 29204
(800) 759-4776
www.iser.com/pro-sc.html

Both Children's Rehabilitative Services (CRS), Department of Health and Environmental Control, and BabyNet, South Carolina's early intervention services program, may be helpful to families of children with heart disease. The CRS nurse at MUSC, Kathleen Couturier can be reached at (800) 343-1983 for a referral. Three advanced practice nurses work in the Children's Heart Program at MUSC and are available to help coordinate services, educate and support families, and be resources for the child's community. All three can be reached at (800) 343-1983.

Robin Ohlinger, RN, MSN
Continuing Cardiology Care Manager,
MUSC Children's Hospital

Catherine Rubinstein, RN, FNP
Pediatric Cardiovascular Surgery

Caroline Tassey, RN, PNP
Pediatric Cardiology

On the Cover:

PEDIATRIC CARDIOLOGY

Antonio Scarpa's anatomical illustration of the heart provides the backdrop of this issue of *The Journal* devoted to pediatric cardiology. A major breakthrough toward progress in the field was the discovery of the stethoscope in 1819. Shown on the cover is the contrast or progress made in auscultation apparatus, a nineteenth century monaural stethoscope from the Waring Historical Library artifact collections and a relatively modern stethoscope. Together, auscultation and knowledge of the underlying anatomy are linchpins of the evaluation and management of major heart disease.

Rene-Theophile-Hyacinthe Laennec (1781-1826), a native of Quimper (Brittany), made his name immortal by his invention of the stethoscope in 1819 (at first only a cylinder of paper in his hands), and by the publication of the two successive editions of his Traite de l'auscultation mediate in 1819 and 1826. Laennec put the diagnostic sounds of cardiac and pulmonary disease upon a reliable basis. . . .[1]

The illustration of the heart comes from *Tabulae nevrologicae ad illustrandam historiam anatomicam cardiacorum nervorum, noni nervorum cerebri, glossopharyngaei, et pharyngaei ex octavo cerebri* by Antonio Scarpa (1752-1832). The large folio volume, which measures 27 inches by 20 inches, was published in 1794. The work was the result of 20 years of research. Garrison and Morton, authors of the history of medicine's definitive bibliographic reference, describes Scarpa's atlas in these words: "The elegantly illustrated anatomical atlas is regarded as Scarpa's greatest work. . . .He personally trained Faustino Anderloni, the artist who made the drawings and engraved the copperplates for Scarpa's books."[2]

Jane McCutchen Brown
Waring Historical Library

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Alliance Page

"YOUR VOICE IS OUR POWER"

This year will be a critical one for the SCMAA's involvement with legislative issues. The legislators at both state and federal levels are currently debating managed care reform, patients' rights, scope of practice, and antitrust reform. These issues are crucial to the health and well-being of every American, and we encourage everyone to let your voice be heard!

Each county president is receiving the *SCMA Alert* to keep apprised of issues and decisions important to all of us. It is our hope to become involved in discussing our position and concerns with legislators. We have encouraged all members to access the AMA Grassroots Network at 1-800-833-6354 and enter 26225542623 (AMA Alliance) for current information.

In September, we will be meeting with Congressman Floyd Spence to discuss patients' rights issues. We have also planned two breakfast meetings—the first February 24, 2000, with the Women's Caucus and the second on March 9, 2000, with the Black Caucus. Both will provide a forum for discussion of issues and presentation of our worthwhile projects. We hope to involve legislative chairpersons from each county.

The counties of Greenville, Sumter, Charleston, Lexington, and Richland have planned legislative receptions. These receptions being planned at the county alliance level are generously subsidized by the SCMA. This is keeping with the AMAA theme of "Your Voice is Our Power." We continue with our partnership with the AMA to promote legislative advocacy. We strive to educate ourselves and others and make them comfortable in sharing their views with our lawmakers.

We can provide you with sample letters and talking points to use in your communication with legislators and others in the community. If you are not currently receiving the *SCMA Alert*, contact Dana Kickey at 1-800-327-1021, ext. 234. The *Alert* will provide you with weekly updates of the important legislation that is currently being debated in Washington. Stay informed and get involved!

Debbie Knight, SCMAA Legislative Chairperson,
1999-2000

Classifieds

ALLERGY & IMMUNOLOGY, CHILD AND ADOLESCENT PSYCHIATRY, DERMATOLOGY, FAMILY PRACTICE, ONCOLOGY, AND OTOLARYNGOLOGY: Practice opportunities exist in local medical facilities and with private practice groups in Orangeburg County for experienced practitioners and graduating residents/fellows. All positions include salary or minimum net income guarantee and a relocation allowance. Located at the junction of I-26 and I-95, 35 minutes to Columbia and 70 minutes to Charleston. Area known for its gardens, golf, hunting and fishing (Lake Marion). Achieve financial success in a non-competitive environment while enjoying a superior quality of life. *Contact Dr. Chermol, The Regional Medical Center at (800) 866-6045.*

BEACH RENTAL: In Wild Dunes, Isle of Palms, SC. Two bedroom, two bath condo, one block from beach and on golf course. Non-smoking, luxury unit with many extras. Rent directly from owner and save money. For more information and rates, call (413) 268-9242 or e-mail to HaiglerPMA@aol.com.

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Gray Matter

“Matters of Interest to South Carolina Physicians.”

Thornton & Thorne give the medical community something to think about this month.

THIS TIME IT’S REAL

PREMIUMS FOR TERM INSURANCE ARE GOING UP

For the last several years we’ve been writing about the impending increase in the prices of term life insurance. The effective date of the legislation that will cause this increase was delayed several times. Now, it’s definite that Regulation XXX will be effective January 1, 2000.

No one knows exactly what will happen in the first quarter of the year 2000 but here’s what we think will occur: Premiums for polices that are guaranteed for 10 years may be relatively unaffected. Premiums for longer-term policies (15,20,25 or 30 years) will be dramatically affected.

We think there will be two types of term policies offered for these longer durations. The first type may offer premiums that are about equal to today’s prices but the premiums will only be guaranteed for 5 years. After that, the insurance company will have the right to increase them.

The second type will offer guaranteed premiums for the full term period but the premiums will be much higher than today’s premiums. In either type, the result is the same. A decrease in the guarantees for the policyowner or an increase in price if you want guaranteed premiums.

The prices for term insurance for the balance of 1999 will be much lower than they will be in the year 2000. Right now is the time to review your term life insurance to lock in the lower rates that are currently available. This is true even if you’ve purchased term in the last few years because premiums have decreased during that time.

Companies today offer more underwriting classes than they did a few years ago. At the beginning of the decade, insureds were classified either as “smokers” or “non-smokers”. Most companies today offer at least “standard” and “preferred” risk classes while some also offer a “preferred-plus” class.

The insured must be healthy to qualify for any of these classes. The requirements are more stringent to qualify for preferred rather than standard and even more so to qualify for preferred-plus. Estimates are that approximately 60% of healthy applicants will qualify as standard, 30% as preferred, and 10% as preferred-plus.

The following premiums serve as guidelines for the various risk classes. They are examples only and do not represent any one company's products. Premiums are for $1,000,000 of 20-Year Term for an insured who has not used tobacco for at least 3 years:

UNDERWRITING CLASS	*Age 40*	*Age 50*	*Age 60*
Standard	$1,600	$3,300	$8,200
Preferred	$1,100	$2,600	$6,300
Preferred Plus	$900	$2,200	$5,400

These premiums clearly demonstrate the importance of being in the best risk class for which you qualify. Underwriting decisions vary, so an applicant who is a standard risk with one company may very well qualify as a preferred risk with another.

The advice of a knowledgeable agent who is familiar with the underwriting practices of various companies is vital to help you through this maze. Be aware that the company with the lowest premium does not necessarily offer the best value. There are many factors other than price that you should consider.

Regulation XXX will have a negative impact on the pricing and features of term policies purchased after its effective date. These higher premiums and/or shorter guarantees make today the best time to re-evaluate your term life insurance needs. Your window of opportunity may be very short.

Views expressed herein are those of the authors and in no way represent SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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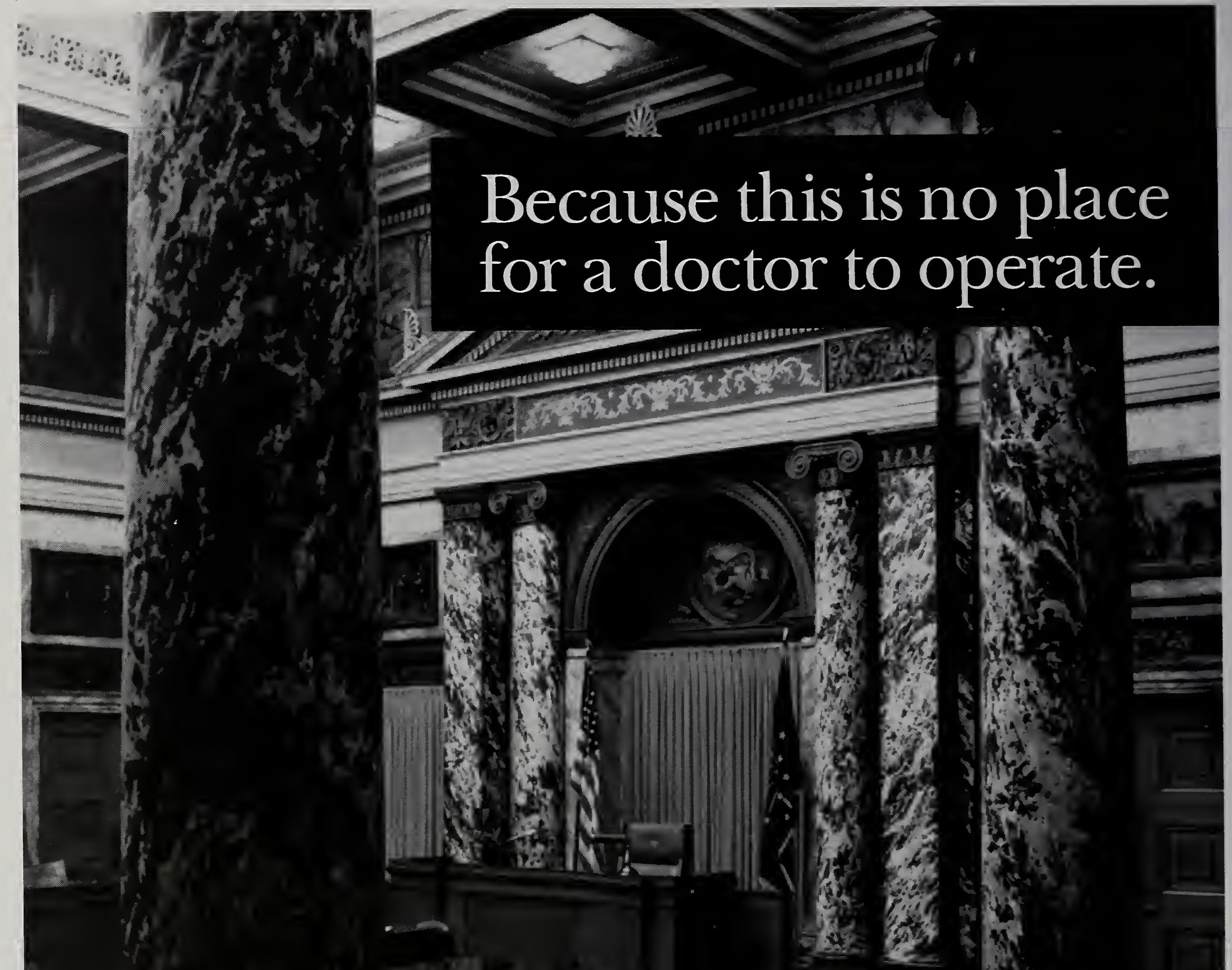
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The Journal
OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 95
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NOVEMBER 1999
PAGES 407-440

COMMON BREAST PROBLEMS
HIGH SCHOOL ATHLETICS
THE PHYSICIAN'S COVENANT
ANDY BAGWELL

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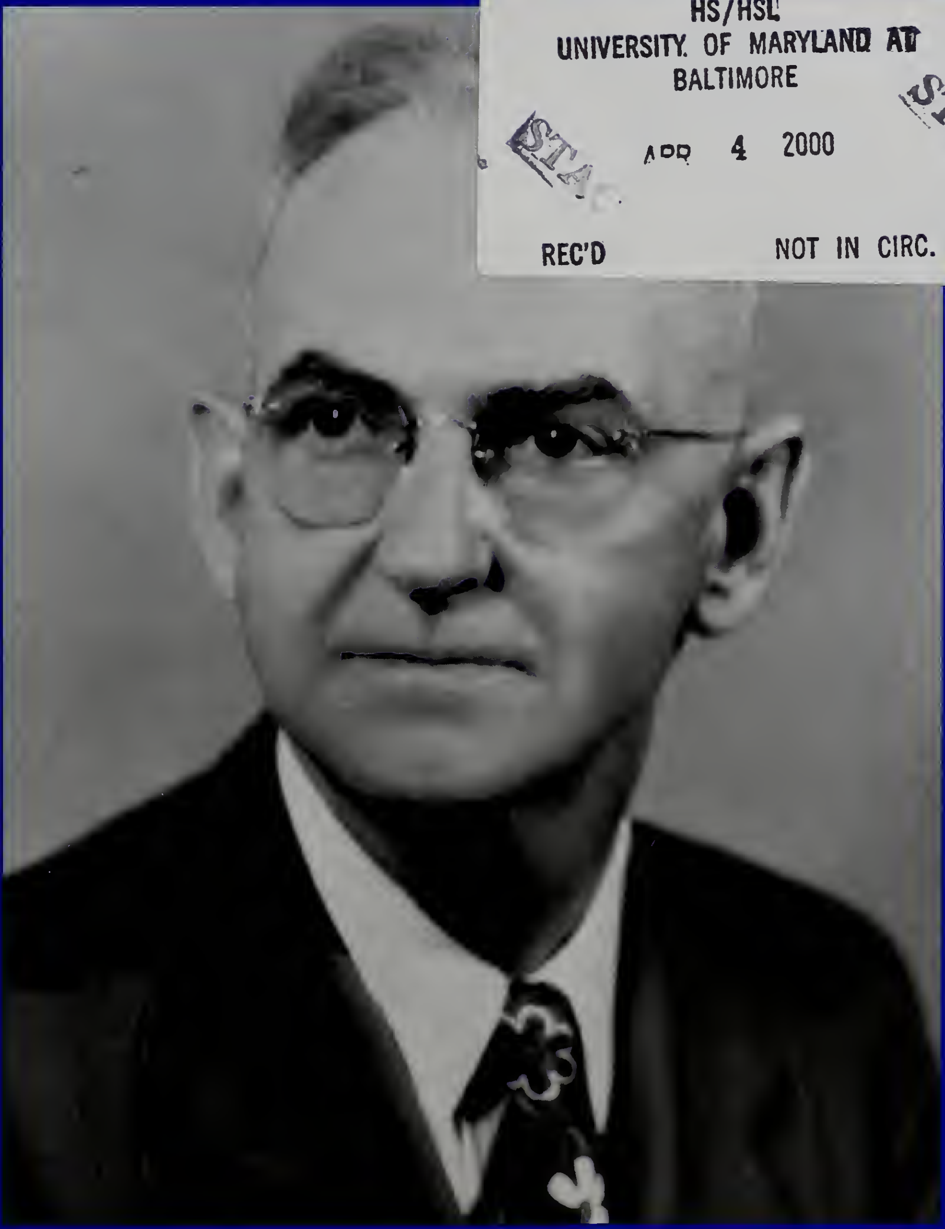

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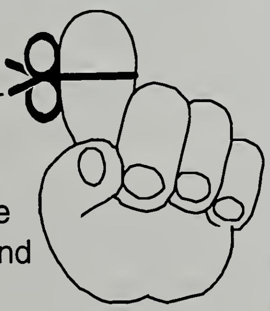

- Each year in the U.S., pneumococcal disease accounts for an estimated 3,000 cases of meningitis, 50,000 cases of bacteremia, 500,000 cases of pneumonia, and 7 million cases of otitis media.
- Pneumococcal infection causes an estimated 40,000 deaths annually in the United States, accounting for more deaths than any other vaccine-preventable bacterial disease.
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- Medicare Part B pays for the pneumococcal pneumonia vaccination.

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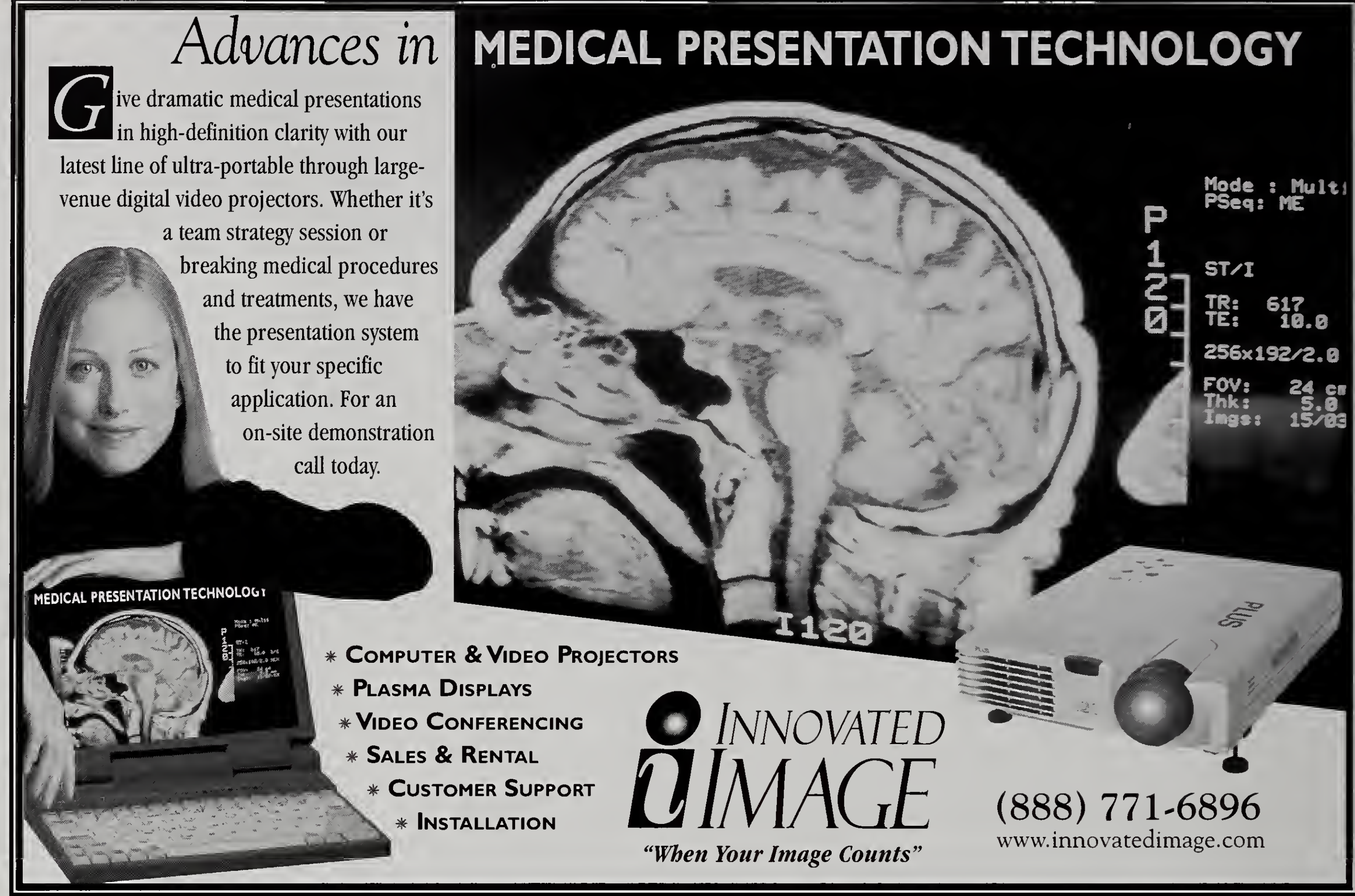

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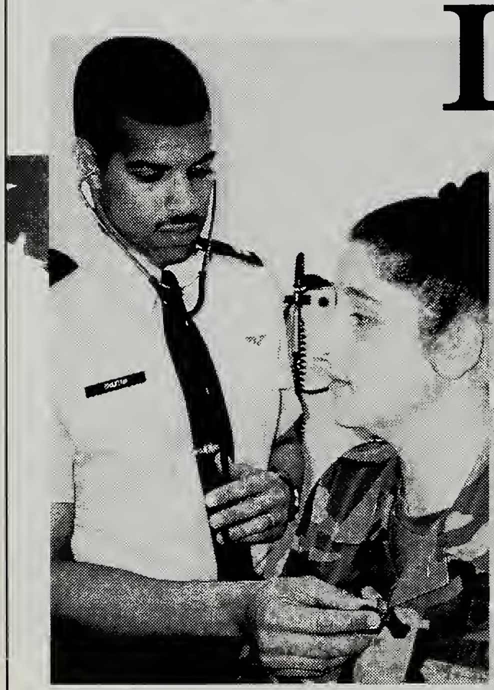

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President's Page

SCMA TAKING AN IN-DEPTH LOOK AT SOME CRITICAL ISSUES

Your SCMA continues to monitor those activities that impact physicians here in South Carolina very carefully. The leadership of the SCMA has met with editorial boards of several daily newspapers in the state to express our concerns about issues such as the Patients' Bill of Rights, state Medicaid issues, and the tobacco settlement. At the time of this writing, the U.S. House of Representatives is deliberating a variety of bills concerning the first issue. The AMA supported bill, proposed by Representatives Norwood and Dingell (HR.2723), is the one that we feel is **best for our patients**. Representatives Graham, Spratt, and Clyburn have signed on as co-sponsors of this bill. We need to thank them for standing up for patients' rights.

At the recent SCMA Board Retreat, several issues that came up for discussion led to the development of three task forces that will take an in-depth look at some very critical issues. The recent evacuation of our coastal areas necessitated by Hurricane Floyd received a great deal of discussion. With highways choked with automobile traffic, it is obvious that it would be impossible to evacuate hospitals and nursing facilities on the coast by that route. Therefore, inland hospitals with beds and resources available to the coastal areas were not usable. Alternative forms of evacuation must be considered.

Another area of discussion centered around women and minorities in organized medicine. Today's medical school class has an average of 40 percent women in the class; however, we see few being encouraged to take leadership positions in medicine. Dr. Carol Nichols was an outstanding president for our own association; Dr. Pam Snape of Greenville has served as president of the S.C. Academy of Family Physicians; and Dr. Nancy Dickey is the immediate past president of the American Medical Association. It is obvious that we need to do a better job in our state of incorporating our women health professionals into organized medicine.

Also, there are very few minority physicians that belong to the SCMA. Most African American physicians in South Carolina belong to the Palmetto Medical Society. Dr. Gerald Wilson, who is on our SCMA Board, has a leadership role in that organization. We need to work collaboratively with the PMS so that we might draw on the strengths of both organizations. It is our opinion that the Women and Minorities Task Force will be extremely important to the future of the SCMA.

The final task force created was the Leadership and Development Task Force. While some leaders are born, oftentimes leaders are developed. It is our opinion that we need to do more to help develop those who have the potential for leadership. Organized medicine can be a very dynamic force in physicians' lives if they give it a chance. SCMA and our county societies will collectively benefit from this task force. If you are interested in serving on any of these task forces, please contact Leslie Freeman at (800) 327-1021, ext. 241. Until next time.

William H. Hester, M. D.
President

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November 1999

MEDICAID UPDATE

DHHS Family Medicine Advisory Committee
At the September 21, 1999, meeting of the DHHS Family Medicine Advisory Committee, DHHS staff discussed ways to decrease the $63 million Medicaid shortfall this year. Immediate goals include reducing the rising drug expenditures. DHHS plans to do this by creating a point of sale program to control the drug quantity dispensed, preventing drug interactions, and possibly performing some physician drug profiling. SCMA President William Hester, MD, chairs this committee. *(see related article.)*

Changes in Medicaid Prescription Services
Effective with prescriptions filled November 1, 1999, the co-payment amount on all applicable prescriptions will be $2.00 per prescription, up from the previous amount of $1.50. There are some exemptions from the collection of co-payment, which include children, family planning prescriptions, and recipients residing in long term care facilities.

Beginning with dates of service October 1, 1999, the Medicaid reimbursement for fee-for-service pharmacy claims is based on average wholesale price (AWP) less 13 percent plus the dispensing fee of $4.05. Physicians are reminded to submit the pharmacy's usual and customary charge when billing Medicaid.

Home Uterine Activity Monitoring (HUAM)/Supplies and Subcutaneous Tocolytic Therapy
Effective August 1, 1999, the South Carolina Medicaid program began covering HUAM in conjunction with Subcutaneous Tocolytic Therapy.

Reimbursement for HUAM in conjunction with Subcutaneous Tocolytic Therapy services is covered through the Department of Durable Medical Equipment (DME). In order for the provider to be reimbursed, the ordering/treating physician must complete a Justification for Home Uterine Activity Monitoring/Supplies and Subcutaneous Tocolytic Therapy (form available through DHHS) certifying that the patient meets the clinical criteria outlined below. The justification form, as well as a Plan of Treatment (POT), is required to be completed at the time of referral and signed by the ordering/treating physician. The DME provider will coordinate the completion of the POT and will be responsible for providing weekly reports to the physician documenting the patient's clinical activities.

Clinical Criteria
The patient must have a gestational age of at least 24

(see Medicaid, page 2)

DEPARTMENT OF HEALTH AND HUMAN SERVICES FAMILY MEDICINE ADVISORY COMMITTEE

The Department of Health and Human Services formed a Family Medicine Advisory Committee in July 1999. The committee has met on two occasions (July 8 and September 21) and plans to meet bimonthly. The committee is composed of 15 family physicians from all across the state and it represents large and small communities.

Of major concern to the agency is a projected $63 million state Medicaid shortfall. Multiple reasons exist for this including: a 37 1/2 percent increase in service delivery; a 10 percent increase in eligible recipients; a dramatic increase in drug costs; and an enrollment of over 90,000 newly eligible children.

The pharmacy program has had the most attention from the committee. Drug expenditures have increased 38 percent in the past year. Of the $250 million spent on all drugs, the top 50 drugs accounted for $80.5 million. The two strengths of Prilosec (20 mg and 40 mg) and Prevacid (15 mg and 30 mg) account for $14.5 million!

Some of the conclusions reached by the Advisory are:

(see DHHS, page 2)

(Medicaid, continued from page 1)

weeks, but not more than 35 weeks, and meet at least one of the following criteria which necessitates a home uterine activity monitor and subcutaneous tocolytic therapy:

- Has experienced idiopathic pre-term labor that has required or will require hospitalization for IV tocolytic therapy.
- Multiple gestation (three or more fetuses) that has required or will require hospitalization for IV tocolytic therapy.
- Patient has uterine anomalies or placenta previa that has required or will require hospitalization for IV tocolytic therapy.

If you have any questions regarding this service and its policy, DME providers should contact their program coordinator at (803) 898-2876. OB-GYN providers should contact Kimberly Edmonds in the DHHS Department of Physician Services at (803) 898-2660.

CAPSULES

Donald E. Saunders, MD, of Columbia has been named this year's recipient of the prestigious Laureate Award from the American College of Physicians - American Society of Internal Medicine, (ACP-ASIM). The Laureate Award is conferred annually on a South Carolina physician who has demonstrated by their example and conduct, an abiding interest in quality medical care, education, or research in their communities.

(DHHS, continued from page 1)

1) the newest drugs are frequently prescribed (and no generic exists); 2) top of the line drugs are used before trying older, less expensive, possibly as effective drugs; 3) direct patient marketing is effective; 4) and dispensing/refill policies (trying to accommodate the patient who has a need for more than the usual four prescriptions) are possibly flawed.

Multiple scenarios for cost control have been discussed and put forward by the Advisory Committee. The agency also presented several plans of their own for discussion and feedback from the committee.

One thing for sure is that we physicians must look at our prescribing habits and reevaluate them. Do we always need to try the drugs we heard about at the last meeting we attended? Can we use a less costly drug? Should we be more restrictive with our own refill policies? Do we place patients on medications and then neglect to periodically see if they still need that medication?

Other items that have been discussed and recommendations have been made by the committee include: 1) medical homes; 2) the dental program just getting underway with good support from the South Carolina Dental Association, and 3) DHEC partnerships.

Look for future updates on the activities of this committee.

—William H. Hester, MD, Chairman

MINI CONSULTATION PROGRAM
A Service of the Medical Economics Department

The mini consultation program was developed by the South Carolina Medical Association's Medical Economics Department to allow physicians and their office personnel to communicate their problems one on one. The SCMA staff visits county medical societies across South Carolina to conduct 30-minute consultations for SCMA members free of charge. Practices receive assistance from the Medical Economics Department in resolving concerns with:

- Billing
- Claims Resolution
- Coding
- Contracts
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- Legal Guidance
- Legislative Issues
- Medical Records
- Operational/Financial Services
- Strategic Planning

For more information regarding the programs offered by the SCMA's Medical Economics Department, please contact Kelly Danias at (803) 798-6207, statewide at (800) 327-1021, extension 236, or via e-mail at kelly@scmanet.org.

PHYSICIANS CARE NETWORK UPDATE

Currently, there are 8,353 participating physician locations, 899 participating ancillary locations and 97 participating hospitals. PCN has 126 contracted groups with 67,185 covered lives. We will continue to provide information as contracts are received.

NEW GROUPS:
- SES; Goose Creek; effective 10-1-99
- Stevedoring Services of America; Mt. Pleasant; effective 10-1-99
- AVEMCO; effective 8-15-99
- Reliance; effective 8-15-99

TERMINATIONS:
- Checkmate of Aiken; effective 7-31-99

RENEWALS:
- Conway Hospital; effective 9-1-99

Please remember to notify PCN when you have a tax ID number change, address change, or when adding or terminating a physician from your group. Early notification will ensure accurate claims payment and provider directory accuracy.

If you have any questions about PCN, please contact Provider Relations at (803) 771-0077, or statewide at (888) 323-9271; fax (803) 771-9474.

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All PCN Claims should be sent to:
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Columbia, SC 29211-1111

Phone: (803) 771-0077
(888) 323-9271
Fax: (803) 771-9474

Send PCN Correspondence to:
PHYSICIANS CARE NETWORK
121 Executive Center Drive
Congaree Building, Suite 203
Columbia, SC 29210

As an added convenience, an updated list of providers can be found at our website, www.physicianscarenet.com

NOTE: PCN is receiving a large volume of claims that cannot be processed due to missing information. THIS DELAYS YOUR PAYMENT!!

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- Valid Service Codes
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AMA Y2K BOOKS

Are you ready for Y2K? If you need help assessing your readiness for the Year 2000, take advantage of this offer. You can obtain a free copy of the American Medical Association's book, *The Year 2000 Problem: Guidelines for Protecting Your Patients and Practice*, simply by calling the Member Services Division of the SCMA. This book outlines the liabilities associated with the Y2K bug and how noncompliance may affect your practice. For more information, contact Anne Harvin Gavin at (800) 327-1021, extension 260.

MEDICARE UPDATE

Workshop Schedule
The following table shows workshops Medicare has scheduled.

2000 Updates	December 6	9:00 a.m. - 12:00 p.m.	Spartanburg**	$20.00 November 23
2000 Updates	December 7	9:00 a.m. - 12:00 p.m.	Greenville**	$20.00 November 23
2000 Updates	December 8	9:00 a.m. - 12:00 p.m.	Columbia**	$20.00 November 23
2000 Updates	December 9	9:00 a.m. - 12:00 p.m.	Orangeburg**	$20.00 November 23
2000 Updates	December 13	9:00 a.m. - 12:00 p.m.	Beaufort**	$20.00 November 30
2000 Updates	December 14	9:00 a.m. - 12:00 p.m.	Charleston**	$20.00 November 30
2000 Updates	December 15	9:00 a.m. - 12:00 p.m.	Florence**	$20.00 November 30
2000 Updates	December 16	9:00 a.m. - 12:00 p.m.	Myrtle Beach**	$20.00 November 30

If you are interested in attending a Medicare workshop, please refer to the October 1999 *Medicare Advisory* for a registration form.

Submitting and Processing Claims in the Year 2000
Claims with Year 2000 Service Dates. Beginning January 1, 2000, you may file claims as usual, but Medicare contractors will hold all claims with dates of service of January 1 or later until January 17 in order to correctly apply the year 2000 payment and other annual updates, including any changes in beneficiary coinsurance and deductibles. You will not need to take any action, other than submitting a millennium compliant claim, to receive the correct payment amount.

By law, electronic clean claims must be held for at least 14 calendar days but no longer than 30 calendar days before payment can be made. The period of time from receipt of year 2000 claims will count toward these requirements. Beginning on January 17, all claims for services in the year 2000 will be released for processing, and claims are expected to be finalized for payment very quickly. Therefore, holding claims with year 2000 service dates until January 17 should only minimally affect their date of payment, if at all (because of the statutory requirement to hold claims payment for at least 14 calendar days).

Claims With Service Dates Prior to Year 2000. From January 1 until 17, claims having dates of service only occurring during the calendar year 1999 or a previous year will continue to be processed and paid using the appropriate payment rates. However, because of the way Medicare's system functions, any claim received from January 1 until January 17, 2000, that includes services occurring during calendar year 2000 and previous years will be held in its entirety until January 17. If you have a claim with dates of service occurring both in 2000 and in a previous year, you should send in two separate claims.

For More Information
Please feel free to contact Medicare for more information about this article or about Y2K issues in general at (803) 788-5568. You can find Y2K information on their website at www.pgba.com. Click on the blinking red Year 2000 button on their home page to go straight to the Y2K information.

MARK YOUR CALENDAR

The SCMA's Annual Meeting and Scientific Assembly is scheduled for April 27-30, 2000, at the Charleston Place Hotel, Charleston, South Carolina.

The Journal
OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 95 NOVEMBER 1999 NUMBER 11

COMMON BREAST PROBLEMS: DETECTION AND MANAGEMENT

D. G. ASKINS, JR., M. D.*

OBJECTIVE

The primary care provider is not infrequently confronted by patients with breast problems, real or imagined, that tax his (or her) diagnostic acumen as well as self-confidence. The provider who confidently tells a patient that a palpable solid mass is benign based on physical examination findings has a self-assurance exceeded only by foolishness. To misdiagnose a lesion, either as benign or malignant, is a wake-up call, frequently a disaster for the patient and a possible legal nightmare for the provider. This paper will attempt to outline a guide for the management of the more common breast problems as well as to aid in the early diagnosis of breast cancer.

INTRODUCTION

In 1994, 183,000 new breast cancers were diagnosed and 46,300 women died from this disease. One in eight women will develop breast cancer by the age of 85. Even though the incidence and risk of developing breast cancer has been increasing over the last few decades, probably due to increased surveillance, the mortality rate has remained fairly constant.[1] In the early 1990s, a gene, BRCA1, which confers a high risk of breast and ovarian cancer, was detected on chromosome 17. Though the presence of this gene may be suspected with a strong family history of breast cancer, the examiner must remember that approximately 90 percent of cases do not have a genetic predisposition.[2] It is only one (though a powerful one when present) of several risk factors that should be considered in the routine screening of women for breast cancer.

RISK ASSESSMENT

1. Age – The risk of breast cancer increases with age.
2. Family history – The presence of premenopausal breast cancer in a first degree relative (mother, daughter, sister) confers a greater risk to the patient.
3. Previous history of breast cancer – In a patient with a history of positive breast biopsy, the risk of developing a new primary cancer of the breast increases each year.
4. Child birth – A nulliparous woman or child birth after age 35 carries an increased risk of breast cancer.
5. Menstrual history – Menarche before age 12 or menopause after age 50 increases the risk of breast cancer.
6. Exercise - Regular exercise at a young age decreases the risk of breast cancer.[3]
7. Nutrition – Nutrition and lifestyle modifications that improve insulin sensitivity may reduce breast cancer risk.[4]

---

* Address correspondence to Dr. Askins at Dept. of Clinical Services, College of Health Professions, MUSC, 165 Cannon St., Suite 403, P.O. Box 250856, Charleston, SC 29425.

8. Obesity – Being overweight appears to be associated with a higher risk of post-menopausal breast cancer in most studies. Conversely, obesity appears to be slightly correlated with a decreased risk of breast cancer in pre-menopausal women.[5]

SYMPTOM ASSESSMENT

The provider should inquire as to the following symptoms, particularly in association with the menstrual period.

1. Breast or axillary lump
2. Breast pain or tenderness
3. Skin changes such as erythema, dimpling and ulceration
4. Nipple discharge, scaling, and retraction

PHYSICAL EXAMINATION

The breasts should be examined in both the supine and upright position. Dimpling may frequently be noted only with the patient upright. The presence or absence of any skin or nipple changes should be noted. The breast should be examined in an unhurried manner, by quadrants, gently milking each quadrant toward the nipple. Each nipple should be squeezed to examine for the presence of discharge. Palpable masses should be noted, including consistency, size (measured), mobility, attachment to skin, tenderness, and location. Both axillae should be examined, describing any palpable nodes. Menstrual timing of the examination and positive and negative findings should be documented.

SCREENING PROCEDURES

Breast Self-Examination:

The role of self-examination of the breast is probably not as important as once thought. Holmberg, et al, in a study of 548,000 women over 13 years, concluded that breast self-examination was unrelated to breast cancer mortality.[6] The U.S. Preventive Services Task Force came to the conclusion "given the present state of knowledge.......a recommendation for or against inclusion of teaching breast self-examination during the periodic health examination cannot be made."[7] Some patients, in the experience of the writer, become obsessed with self-examination particularly after a relative or close friend is diagnosed. They will carry self-examination to an extreme, resulting in trauma and tenderness to the breast. Therefore, self-examination should not be emphasized. If done, it should be limited to once a month, seven-nine days after menses.

Physical Examination:

Breast examination should be part of the annual health maintenance examination after age 30. This is a personal preference of the writer. Some recommend starting as late as age 50.[7] Clinical examination of the breast should be done in conjunction with screening mammography.

Screening Mammography:

In 1997 the American Cancer Society Guidelines were revised and now recommend mammography annually starting at age 40 instead of age 50.[8] Previously, the benefit to this age group (40-49) had been questioned and remains somewhat controversial. However, recent studies indicate a one in 66 risk of developing breast cancer in this age group. A meta-analysis of eight randomized clinical trials yielded a significant (18 percent) reduction in mortality with mammography screening. Also, no age is specified at which screening should be terminated. Routine mammography earlier than age 30 is non-productive because of the rarity of cancer in this age group and the density of the breasts.

EVALUATION AND MANAGEMENT OF PALPABLE MASSES

Discrete palpable masses must be carefully evaluated. Cystic masses are almost always benign and can be managed by aspiration. The fluid should be clear or cloudy and there should be no residual mass after aspiration. If the mass does not completely disappear or is present at follow-up examination or if the fluid is bloody, the patient should be referred to a surgeon for excision. Fluid that is bloody should be sent for cytology; others may be discarded.

A patient with a solid palpable mass must have cytologic examination and should be referred to a surgeon. Mammography is indicated, not to determine the characteristics of the mass so much as to evaluate the remaining breast on the affected side and also the other breast. A normal mammogram does not eliminate need for further evaluation of a

AMERICAN COLLEGE OF RADIOLOGY CATEGORIES OF MAMMOGRAPHY RESULTS	
0	Assessment is incomplete; additional imaging evaluation needed
1	Negative finding
2	Benign finding
3	Probably benign finding: short follow-up interval suggested
4	Suspicious abnormality; biopsy should be considered
5	Highly suggestive of malignancy; appropriate action should be taken

Table 1. *Information from American College of Radiology*

clinically suspicious mass. MRIs are currently indicated only when implants are present, usually to determine if there is rupture. The usefulness of CAT scans has not been determined.

Fine-needle aspiration may be performed at the time of discovery. False-positive and false-negative rates are dependent upon the technical quality of the aspirate and the experience of the pathologist interpreting the slides. If findings are equivocal, open biopsy is indicated. False negative rates for stereotactic needle biopsies are also significant.[9]

Fibroadenomas usually have a firm, rubbery feel, and are non-tender, discrete and mobile. They usually occur in younger females, most often in their teens. Treatment for fibroadenomas involves elective surgical excision or careful follow-up, especially when diagnosis is confirmed by biopsy. The patient should be made aware that rarely malignancy may be associated with fibroadenomas.

Vague nodularities may be quite disconcerting to some patients. These are frequently noted in the premenstrual phase, may or may not be tender and/or bilateral. The breast should be examined in the post menopausal phase. Even if diffuse and poorly defined, if the nodularities persist, mammograms are usually indicated and may relieve some of the anxiety of the patient and the examiner. However, with persistence throughout the menstrual cycle and a presence noted after several bimonthly or quarterly checks, referral to a surgeon is usually indicated.[10]

EVALUATION AND MANAGEMENT OF NONPALPABLE MAMMOGRAPHIC ABNORMALITIES[10]

The categories of mammography results specified by the American College of Radiology are shown in Table 1.[11] The patient should be referred to a surgeon if results are reported as category four (suspicious abnormality) or five (highly suggestive of malignancy). If further studies are recommended, they should be completed before referral as some equivocal results may be resolved by a more complete radiological work-up. If category three (probably benign: short follow-up interval suggested) is reported the lesion has no more than a two percent chance of being malignant. Further careful physical examinations will determine the need for repeat mammograms.

There is a very low but possible risk of a delayed diagnosis of cancer in these patients and they should be so informed. If unwilling to accept this risk or if a high-risk patient, she should be referred to a surgeon.

Nonpalpable cysts discovered by mammography need not be aspirated if confirmed as a simple cyst by ultrasound.

BREAST PAIN[12]

Mastalgia is one of the most common breast complaints causing women to seek medical attention. The most common type of breast pain is associated with the menses, occurring premenstrually. This pain is usually vague, bilateral and cyclic. The only drug approved by the Food and Drug Administration is the antigonadotropin, danazol (Danocrine). The side effects are significant and it is only recommended for the most severe, disabling type of pain.

Breast pain may infrequently be associated with cancer or benign cysts. Fibrocystic disease is another common cause of breast pain. Histopathologically this is manifest by fibrosis, cyst formation, epithelial hyperplasia and adenosis. Nonproliferative lesions are associated with no increase in the risk of breast cancer and account for 70 percent of the cases. Hyperplasia is present in 26 percent and, if present, doubles the risk of breast cancer. Atypical hyperplasia is present in only four percent and the relative risk of cancer is four. These patients should be informed of the increased risk and should be followed with twice-yearly clinical exams.

Mastoplasia with fibrocystic disease can usually be managed with the use of a supportive bra and NSAIDS. Diuretics and oral contraceptives may help. Dietary measures, such as reduction in caffeine, salt and chocolate, have no proven scientific basis but seem to offer some relief to many patients. If pain persists, surgical removal may be a last recourse.

NIPPLE DISCHARGE:[9]

Nipple discharge is frequently seen in healthy women. Yellow, green and milky discharges are not indicative of breast malignancies. The latter, galactorrhea, is usually bilateral and may be distinguished from physiologic changes by the presence of fat under the microscope. Hypothyroidism, chest trauma and certain pharmacologic agents may be the cause. Prolactin levels should be checked and if significantly elevated, a MRI scan of the head should be obtained to rule out a pituitary prolactinoma.

Discharge that is bloody, watery, sticky or unilateral, especially when confined to one duct, may be a sign of cancer and should be further evaluated. Cytologic analysis is rarely useful and not cost effective.

Crusting or erosion of the nipple may indicate Paget's disease and warrants referral to a surgeon.

BREAST INFECTIONS

Breast infections are most often seen with engorgement of the breast such as in periods of weaning. These should be treated with antibiotics, warm soaks and drainage if abcess is formed. Cellulitis of the breast that persists in spite of antibiotic therapy suggests inflammatory carcinoma and should be biopsied.

SUMMARY

Current guidelines and techniques for cancer screening are presented. Assessment of risk factors and significant physical and historical findings are discussed. Management of the more common breast problems is outlined. The primary care provider is left with the following thoughts (suggestions):

1. If a patient's worries or concerns are not relieved by a negative work-up, a second opinion should be sought.
2. 80 percent of the women with breast cancer have no identifiable risk factors!
3. High-risk patients should have increased surveillance or referral to a cancer specialist.
4. Any palpable solid or suspicious mass should be evaluated, even with a normal mammogram.

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HEALTH CARE COVERAGE OF HIGH SCHOOL ATHLETICS IN SOUTH CAROLINA: DOES SCHOOL SIZE MAKE A DIFFERENCE?

PETER J. CAREK, M.D., M.S.*
JARED DUNN
ALEXANDER HAWKINS, A.T.C.

INTRODUCTION

The incidence of injury to athletes participating in interscholastic sports has been extensively examined.[1-12] The injury rate among high school athletes, especially football players, varies in the literature from 21 percent to 50 percent, with occasional catastrophic events reports.[1-3, 5-7] Though most of the injuries occur during practice, participation in games exposes the athlete to the highest risk of injury per unit time.

Despite this apparently high injury rate, medical coverage available to these athletes is often not immediately present during practice and games. With this minimal amount of coverage, concerns regarding prompt and proper treatment and rehabilitation of injuries arise. Several surveys have been published that include information on various aspects of high school sports injuries and health care coverage of interscholastic athletic events, particularly football games.[12-19] Depending upon the enrollment number and state, between 27 percent and 82 percent of high schools report not having a physician present during high school football games.[13, 17-19] Family physicians and orthopedic surgeons are medical specialties most often identified as serving as team physicians.[18, 19] Furthermore, basic medical equipment, recording and tracking systems for athletic injuries are often lacking.

The purpose of the present study was to examine the current conditions of health care coverage and delivery to the football program and associated athletic departments in the public and private high schools in South Carolina. Additionally, the relationship between student enrollment and medical coverage was examined.

METHODS

A questionnaire was developed by members of the MUSC Sports Medicine Program and was based upon similar previously used instruments. The survey contained questions regarding the number of students, physicians, and trainers, preparticipation physical examinations, injury data collection, and follow-up care of the injured athletes. Additionally, information pertaining to game equipment, game coverage, and injury litigation was requested.

A list of the high school athletic directors with their corresponding addresses and telephone numbers and other demographic information regarding specific high schools was obtained through the South Carolina High School League and the South Carolina Independent School Association. The questionnaire was sent with a cover letter to the athletic directors of high schools with an interscholastic football program. The cover letter contained the statement detailing the current study, including specific aims, methods and confidentiality. The athletic director was asked to complete this questionnaire or assign it to an appropriate high school staff person. Using the self-addressed stamped envelope provided, the completed questionnaires were returned and the information provided was entered into an electronic data base.

Descriptive statistics were used to characterize and summarize the data obtained. The information was then analyzed using the Epi-Info statistical program and examined for significant differences between subjects based upon gender and race. Analysis was completed using a chi-square. Significance was defined as $p<0.05$ level of confidence. To examine the relationship between

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	Number of schools (%)
Football team physician(s) identified	91 (67)
Specialties represented by team physician	
Family Practice	49 (54)
Internal Medicine	10 (11)
Orthopedics	57 (63)
Pediatrics	2 (2)
Team physicians compensated	0 (0)
Football athletic trainer	75 (55)
Medical personnel available to evaluate and treat female athletes	81 (89)

Table 1. Medical personnel identified by SC high school athletic departments.

medical coverage and school enrollment, the schools were divided into quartiles based upon total enrollment.

RESULTS

Of the 235 questionnaires sent, 135 (57 percent) were returned completed. The average enrollment of the responding schools was 890 (range: 45-2,970) students.

As noted in Table 1, many high schools lack identified medical personnel responsible for sports medicine coverage. Sixty-eight percent of high schools have an identified team physician. Of the schools identifying a team physician, orthopedic surgeons (62 percent) and family physicians (54 percent) are most commonly identified as team physicians. Many schools with a team physician (23 percent) reported having more than one identifiable team physician, listing both a family physician and orthopedic surgeon as team physicians. None of the schools reported directly compensating their team physician. A difference did not exist when public and private schools were compared for the designation of a team physician.

In regards to other medical personnel available, over three-fourths of the high schools (82 percent) have a trainer assigned to the football team. Of the schools with identifiable medical personnel, these health care providers are available to evaluate and treat female athletes in 89 percent of the high schools.

When the medical care available for practices and games was examined, we found that basic medical equipment is not available at many of the high schools (Table 2). Also, medical coverage for practice/scrimmage sessions or home football games is available at some schools, but many schools have no coverage. Forty-one, thirty, and three percent of the schools reported that the football coaches were trained in basic first aid, CPR/BLS, and ACLS, respectively.

The medical record system in the high schools surveyed is inconsistent. In particular, many schools did not report having written records of football injuries (10 percent), proof of health and accident coverage from athletes (22 percent), “permission to treat” statements from parents or guardians on file for all athletes (16 percet), “release of liability” statements from parents or guardians on file for all athletes (22 percent).

To evaluate the effect of school size in medical preparedness, we categorized the schools into quartiles based on total student enrollment and analyzed for any differences between the first and fourth quartile (largest and smallest schools). We found that the smallest schools were significantly less likely to have a designated team physician identified or have a football trainer (Table 3). We also found that, with the exception of the availability of a telephone and first aid kit, small schools were also significantly less likely to have access to other appropriate medical and safety equipment.

Interestingly, though the larger schools were significantly more likely to have a physician present at home football games, the smaller schools were significantly more likely to have a coach trained in basic life support.

Finally, the relationship between the presence of a team physician at home football games and whether coaches were certified in basic first aid was examined. The presence of a physician during home football games was not significantly related to whether or not coaches were certified in basic first aid ($X^2=0.07$, $p=0.79$). A significant difference was noted in the mean enrollment of the high schools based upon the presence of a physician and/or certification of coaches ($X^2=51.82$, $p<0.01$).

COMMENTS

While the results of the current study indicate that a majority of high schools in South Carolina appear to have adequate sports medicine coverage and compare favorably with the results of similar data from other states (Table 4), many schools lack many key aspects of sports medicine coverage. In particular, the identification of a designated health care provider, whether a team physician or athletic trainer, is not accomplished at many schools. Primary care physicians are as likely to be included as a team physician whereas orthopedic surgeons are designated as a team physician significantly more often in schools in the highest quartile of enrollment than those in the lowest quartile of enrollment. Interestingly, no high school team physician was reported to be directly compensated for providing medical coverage. Based upon the finding that about two-third of the schools could identify a designated team physician, compensation for this role does not appear to be necessary for a majority of the high schools surveyed. The current study did not address the motivation or basis for this finding.

Additionally, some medical equipment neces-

	Number of schools (%)
Readily available equipment	
Stretcher	77 (57)
Spine board	59 (44)
Bolt cutters (for face masks)	79 (59)
Splints	99 (74)
Cordless/Cellular phone	83 (62)
Telephone close to field	104 (78)
First aid or Trauma kit	113 (84)
Medical coverage of practice and scrimmage sessions	
Physician	14 (10)
Designated physician on call	68 (51)
Stand by ambulance	32 (24)
On call ambulance transport	87 (65)
Medical coverage at scheduled home football games	
Physician	81 (60)
Nurse	4 (3)
Chiropractor	5 (4)
Ambulance with EMT or Paramedic	105 (78)
Ambulance without EMT or Paramedic	0 (0)
Ambulance not present but on call	19 (14)
Physician's assistant or Paramedic	7 (5)

Table 2. Medical equipment and medical coverage of practices and games.

Enrollment (mean ± SEM)	1699 (±438)	171 (±74)	
Number of schools (n)	33	33	
Football team physician(s) identified	30 (90)	18 (55)	p<0.01
Specialties represented by team physician			
Family Practice	15 (50)	12 (67)	NS
Internal Medicine	3 (10)	4 (22)	NS
Orthopedics	22 (73)	6 (33)	p<0.05
Pediatrics	1 (3)	1 (6)	NS
Football athletic trainer	28 (85)	12 (36)	p<0.01
Medical personnel available to evaluate and treat female athletes	27 (90)	14 (78)	NS
Readily available equipment			
Stretcher	22 (67)	17 (52)	NS
Spine board	20 (61)	11 (33)	p<0.05
Bolt cutters (for face masks)	28 (85)	18 (54)	p<0.01
Splints	30 (91)	23 (70)	p<0.05
Cordless/Cellular phone	28 (85)	19 (58)	p<0.05
Telephone close to field	28 (85)	25 (76)	NS
First aid or Trauma kit	31 (94)	27 (82)	NS
Physician present at home football games	28 (85)	15 (45)	p<0.01
Coach(es) trained in basic first aid	9 (27)	19 (58)	p<0.05

Table 3. Comparison of medical care provided to the highest and lowest quartile schools based upon total enrollment.

sary to provide basic medical care may not be available. Though some of the equipment included in the survey may not be considered necessary to emergency health care, some basic equipment (e.g., bolt cutters or other device to remove the face mask of an injured football player) is not available in many schools.

Finally, most coaches, who may be the only adult supervision present during practice and game situations, are not trained in basic first aid or other life support skills. As most athletic injuries require initial first aid and coaches are usually the only adult supervision present during most practice and game activities, training more coaches in basic first aid appears to be a logical recommendation.

Though not unexpected, the medical coverage and equipment available to the smallest schools as compared to the largest schools was found to be significantly different. Specifically, the larger schools more often had a designated team physician and/or athletic trainer, had appropriate medical equipment, and had either a physician present at home games or a coach certified in basic first aid. Of interest, the smaller schools were more likely to have a coach trained in basic first aid. Despite the differences in medical coverage between the larger and smaller schools, we are unaware of any study which demonstrates any difference in the injury rate or subsequent morbidity between schools of various size or medical coverage.

Certain limitations of this study deserve mention. First, the completed questionnaires were from the high school athletic departments in South Caro-

	Culpepper, 1987	Lindaman, 1991	Vangsness, 1994
Number of high schools studied	131	407	240
Sports studied	All	All	Football
Percent with team physician	55%	61%	71%
Family physician	66%	68%	34%
Orthopedist	13%	22%	28%
Percent with designated athletic trainer	24%	26%	69%
Percent with physician available for practice and/or games (both male and female events)	35%	13%	72%

Table 4. Studies determining sports medicine coverage at high school athletic practice and events.

lina and the generalizability of our findings to other groups of high schools is limited. In addition, the number of sports offered at each high school are not all identical and may affect the sports medicine provided. The effect of non-respondents upon the results may have altered the results, though a greater than 50 percent respondent rate is considered excellent for a mailed survey. Finally, although the questionnaire was reviewed for content appropriateness, understanding and readability, test-retest reliability was not assessed.

Along with previously published articles, the results of the current study suggest future avenues of research. Specifically, the medical coverage which provides the most effective and efficient treatment and rehabilitation from athletic injuries requires further study. Additionally, does the presence of a physician, athletic trainer, basic medical equipment, coach with training in basic first aid, and/or other forms of athletic health care coverage prevent or improve the outcome of athletic injuries?

In conclusion, a majority of high schools in South Carolina appear to have adequate sports medicine coverage and compare favorably with the results of similar data from other states. The medical coverage does significantly vary depending upon the enrollment size of the high school. In spite of this finding, the health care provided high school athletes is often inconsistent and training and equipment required for basic first aid is often absent.

SUMMARY

Despite an apparently high injury rate, medical coverage available to these high school athletes is often not immediately present during practice and games. The purpose of the present study was to examine the current conditions of health care coverage and delivery to the football program and associated athletic departments in the public and private high schools in South Carolina. Additionally, the relationship between student enrollment and medical coverage was examined.

A survey, based upon previously utilized instruments, was sent to the athletic directors at the public and private high schools with interscholastic football programs in South Carolina. The survey included questions pertaining to the medical coverage, including personnel, equipment, and record systems, for football practices and games.

Based upon the results of the survey, a majority of high schools in South Carolina appear to have adequate sports medicine coverage and compare favorably with the results of similar data from other states. The medical coverage does significantly vary depending upon the enrollment size of the high school. In spite of this finding, the health care provided high school athletes is often inconsistent and

training and equipment required for basic first aid is often absent.

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THE PHYSICIAN'S COVENANT - SANCTITY IN SERVICE*

NASEEB B. BAROODY, M.D.**

We cannot objectively measure it nor can we chart it. It is unseen and leaves no images on our sophisticated devices. It cannot be tested in the laboratory nor can it be made subject to our evidence-based calculations. Yet without it there can be no life. In the finest sense, our joy is our life.

Where do we find joy in the practice of medicine? We could all quickly name many circumstances that brighten our day reaffirming our decision to become medical doctors. And yet, if we could talk one on one, we would all agree that we who see so much death and suffering, pain and disability would ask, "where is joy?" In the presence of sickness and diseases that face us daily, how can we affirm that joy that undergirds us and supports us?

Covenants, well kept, contain within them the seeds of joy sacred agreements between two parties based on honor, a matter of the heart. As physicians, with some exceptions, we have been people of the covenant—men and women of honor, honored and respected by the world around us. Our covenant is with our patients. Hippocrates and Aescalapius defined it as a unity of the spirit between patient and doctor in a trust based on compassion and concern.

In contrast, physicians are now with contracts, which are complex and problematic. Again, there is an agreement between the two and perhaps three parties bound by law and the courts. Herein lies the separation between medical care and managed care. We may remember as Bismarck said, "if you like laws or sausage, you must never watch either being made."[1] Yet, surely we must, for as Emerson wrote, "the wise know that foolish legislation is a rope of sand which perishes in twisting."[2] Also, Madison in his Federalist Papers stated, "it will be of little avail to people that the laws are made of people of their own choice if the laws be so voluminous that they cannot be understood; if they be repealed or revised before they are promulgated or undergo such incessant changes that no man knows what the law is today, who can guess what it will be tomorrow?"[3]

And yet, law has the capacity, as respond in duty to it, to lead to joy. Shakespeare, the Bard of England, stated the "Joy is in the doing of it,"[4] and Martin Luther King in his Nobel Peace Prize speech, described a "joy unexplainable."[5] Seeking out this joy through duty must be an individual pursuit.

President Woodrow Wilson, in a speech at Princeton, stated that "we live in an age disturbed and confused, bewildered and afraid of its own forces, in search not merely of a road but its direction—it is our duty to find ourselves.[6] In such chaotic times as ours, there is again a compelling duty to find our road and our direction. Calvin Coolidge stated that "we do not need more material development; we need more spiritual development. We do not need more intellectual power, we need more moral power. We do not need more knowledge; we need more character. We do not need more government; we need more culture. We do not need more law; we need more religion. We do not need more of the things that are seen; we need more of the things that are unseen."[7]

Although recent upheaval in medicine has confused our purpose and confounded our mission, let us not lose sight of the covenant, which is our sanctity in service. In realizing our sanctity in service we do our duty and therein find our joy. When we would look at our joy as a measurement of our relationship with God, we recall that the Psalmist has said, "the statues of the Lord are trustworthy making wide the simple. The precepts of the Lord are right giving joy to the heart."[8]

It is in the power of our creator that we are given the joy to express our compassion when our passion is depleted. Nehemiah, the prophet, reminds

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us that "the joy of the Lord is our strength."[9] Additionally, in the Pentateuch we read in Deuteronomy "for the Lord will bless; you in all your harvest and in all the work of your hands, and your joy will be complete."[10]

We would gain encouragement from the prophet Isaiah who stated, "He gives strength to the weary and increases power of the weak. Even youth grow tired and weary, and young men stumble and fall; but those who hope in the Lord will renew their strength. They will soar on wings like eagles; they will run and not grow weary, they will walk and not faint."[11]

As we attempt to define, in the midst of imposed confusion and disarray, our concept of the service to which we are committed, let us surround ourselves with self-forgetful humility. Let us be reawakened to the higher consciousness of our calling. We have been set apart, and in that context, we will find joy in the sanctity of service to others.

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ANDY BAGWELL*

ROBERT E. HOLMAN, M.D.**

Andy Bagwell was the baby in a family of six children. He was forty years old when I met him. He was running the Texaco station on the corner by the only stop light in town. He was a master at hustling a car. His daddy had been a blacksmith and moved into gasoline motors when the first cars came to the area. Andy adored his daddy and learned what his daddy taught him. Andy rented the station from the Harter family. The old Mr. Harter had died several years ago, and his son, Ed, had taken over the business. Ed Harter and Andy Bagwell were not friends. Ed Harter was very interested in the prompt payment of the rent and of the gasoline purchased from the Harter Oil Company. Andy was more interested in talking to customers, fishing, and drinking whiskey.

The drinking of booze was Andy's biggest weakness. He went on a binge at least every other month, and such binges were very costly to him, his family and the Harter Oil Company. A generous man when sober, Andy was the easiest touch in the country when inebriated. He let everybody buy gas on credit when sober; he gave the gasoline away when under the influence. Fishermen on their way to the lake had to pass by the Bagwell Texaco station, for the two main roads to the river and lake intersected at the stop light. Many a fisherman could not believe that he had a tank filled with free gasoline, but he did. The local freeloaders flocked to the station to take advantage of Andy's generosity.

It was not long before Ed Harter got wind of the free gasoline, but he did not go to Andy. He went to his wife to blow the whistle. Ellen Bagwell had married Andy seven years earlier; she was his third wife. They had three children. Ellen was no stranger to dealing with men who abused whiskey, for her father had been an alcoholic long before she was born, and two of her brothers had followed their daddy to the log woods and the whiskey still. Hearing of her husband's current binge, Ellen told Ed Harter that she would take care of the situation.

As soon as she could change into a pair of clean jeans and a denim shirt, she went to the station. Seeing her coming, Andy filed out the back door, across the fence, and into the woods. Ellen took over the station. All gasoline was cash on the barrel head, as she said, and she tried to get the names of the free loaders, retrieving as much of the loss as possible.

Andy went across the branch to Nell Hunt's house. Nell ran a store with a beer business and a bait shop, and there were several girls available with favors for those who had the right kind of money. Andy and Nell had been classmates in school before both of them quit in the eighth grade. Both went to work in the local sewing room. She was a seamstress, and he was a maintenance man. They were friends long before Andy married Ellen. In earlier days, Andy was no stranger to Nell's bedroom. Needing to go out of town for a few days, Andy asked Nell to drive him to Charleston. She agreed. They would go by the station and fill up the car before leaving. As they pulled up in front of the station, the young man who helped Andy came out to the car.

"Fill the SOB up!" Andy blurted.

Ellen was tidying up the station, and as she looked out, she saw the young attendant looking at her for guidance.

"Fill the SOB up I said! Can't you hear boy?," Andy shouted. Ellen bolted from the station. Her face was pale with anger.

"I can hear! I can hear every word you said. You drunk nothing. You said fill the SOB up. Well, I'll fill you up, you . . . ," she said.

Yanking the door open, she pulled Nell out. Then she reached for Andy, but he was out the other side and running down the street.

Ellen exclaimed, "Nell, you know better! Now git yourself in this car and git!."

She did not have to repeat herself, for Ellen and Nell had fought before, and Nell had come out on the short end. Nell got into the car and scratched off. She left tire marks on the pavement that were there a month later.

---

* All names are fictitious.

** Address correspondence to Dr. Holman at P.O. Box 340, Elloree, SC 29047.

Everybody who knew Andy tried to help him give up the booze. He even tried AA. He just did not want to part company with John Barleycorn. All well-meaning help fell on barren ground. Andy was a most helpful man when sober, and he was the sorriest rascal known to man when drunk. During these binges, it was not unusual for him to come to the back door under the cover of darkness. He would not drive the car, for Ellen had hidden the keys or removed a spark plug or reminded him that he had lost his driver's license. He would borrow his sister's three-wheel bike.

"I need heep, doc. You my frain. You 'bout the only frain I got."

"I sure am," I replied, "maybe the only one when you're drunk."

"I'm tryin' to sober up now. Heep me, please," he sobbed.

"Come in and sit down."

He entered the small office off the back porch. I checked his blood pressure and told him if he drank any more he would die. Then, Andy got what he came for: an injection containing a sedative. I drove him home. Ellen put him to bed.

"The bicycle is at my house," I told her.

"I'll send for it tomorrow."

At breakfast the next morning the four-year-old girl looked out on the back porch, and her face brightened.

"Daddy! Daddy!" she exclaimed, "Mr. Andy brought the bike! I'm so glad!."

"Don't be so glad. I bet he's drunk again," said her eight-year-old sister.

"Can we ride the three wheeler?" asked the four year old.

"You can ride it on the driveway. Not in the street."

"How long will we have it this time?"

"Til he sends for it or Miss Biddy sends the police for it."

"She might, but I doubt it."

"Will you move the cars out of the garage so we will have more room to ride and turn around?"

"As soon as I finish my breakfast."

"Is Mr. Andy still drunk?"

"No, he's asleep in his clean, warm bed."

"Did his wife beat him up with her broom?"

"I don't know."

"Is he a bad man?"

"No."

"Then why does he steal his sister's bike?"

"He didn't steal it. He just borrowed it."

"If he didn't ask, that's stealing. That's what Mamma said."

"I've got to go to the office. Take the paper and coffee to your mamma and be good girls. Gimme a kiss."

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American Medical Association
Physicians dedicated to the health of America

Editorials

THE ENGLISH LESSON

"Oh the times! Oh the manners!"
-Cicero

"Manners require time, as nothing is more vulgar than haste."
-Emerson

A year of planning, a week of pleasure. Our foursome— Mac, Wickie, the Mullet, and I—lingered in the pub, celebrating a memorable morning at Muirfield. Wickie had just completed his dream of playing every venue where they'd ever held The Open, and he'd done it in style, breaking 80 with ease. Mac had made an eagle. And the Mullet and I—well, let's just say we had lots of fun, lots of shotmaking opportunities. Ahead that afternoon lay North Berwick, my favorite links in the world. I checked the time. "Let's go, guys, we're running late." But whoops, the coupons were back in the room.

Wickie left the motor running as I dashed into the Marine Hotel. The first task was to retrieve the room key. Over there, they avoid runaway room keys by issuing only one per party, usually attached to a bulky object too large for one's pocket. The custom is to leave the key with the desk clerk when you go out. Two Englishmen stood at the desk waiting for the clerk, who was nowhere in sight.

After what seemed like an eternity, she came back to her station. The Englishman's request evoked a wee frown. She began to make telephone calls while typing on the computer. Our tee time was now just minutes away. I leaned forward and whispered, "Psst-I just need my room key."

The other Englishman was in my face within a nanosecond. He let me have it. He brayed to the entire lobby, "Over heah we have mannuhs, mind you. You wait your turn. You don't just run over people." There was no defense. I looked him squarely in the eye and said gently but firmly, "I agree."

A driving rain kicked up just as we reached the first tee in the nick of time, adding insult to injury. The sun came out on the back nine, and—my spirits boosted by the ancient stone walls, the blind shots over hills, the quaint greens, and the splendid views of Bass Rock out in the Firth of Forth—I savored yet another near-perfect day. Although I didn't say a word about the incident, I knew the Englishman had left me with a choice. I could add the sorry episode to others in my life brought on largely by ignorance of local ways and customs: the street vendor in London, the baker in Aix-en-Provence, the taxi driver in Rhodes. Or I could take it as a challenge to reflect, to review paradigms, to question attitudes and behaviors, to become a better person.

Finishing my book the next afternoon an hour out of Charlotte, I struck up a conversation with the Englishwoman sitting next to me in the bulkhead.

"Tell me," I asked innocently, "What do you think of Americans' manners?"

"Do you really want to know?"

"Yes."

"We think you're rude."

I then recounted the unpleasantness in the lobby of the Marine Hotel at North Berwick. "Oh yes, lines are very important to us." We reviewed how I might have handled the situation differently, perhaps by asking the two gentlemen ahead of me for permission to speak to the clerk.

When it comes to manners, I had fancied myself somewhere in the upper quartile of Homo sapiens, at least when time is a-plenty. But therein lies the rub. Pressured by competing time demands, I'm capable of assuming the telephone personality of a piranha, the bedside manner of a barracuda. On occasion I'm reduced to a blithering idiot. Exciating time pressures have always been, for me, the downside of medicine. I marvel at the way some family physicians can see 80 or more patients a day without getting flustered, at how some intensivists retain their poise and composure under extreme stress. These people must be made of kryptonite! Yet studies show that small acts of discourtesy make up a large fraction of patient dissatisfaction and a major reason for changing physicians. Many people will tell you, "Doctors are always in a hurry."

Suboptimal manners are not, of course, unique to medicine. A 1996 U.S. News and World Report survey showed that 89 percent of Americans consider incivility to be a serious problem, with 78 percent saying that it had gotten worse over the previous decade. A survey of the recent literature reveals book titles such as *A Short History of Rudeness: Manners, Morals, and Misbehavior in Modern America* and *Civility: Manners, Morals and the Etiquette of Democracy.* The latter author argues that our growing incivility threatens democracy itself. Nor are Americans unique. Prime Minister Tony Blair recently said the same about the United Kingdom. My transgression at the Marine Hotel illustrates the most important etiquette problem in daily life: the Interrupter. Yet stat pages, cell phones, voice mail, e-mail, and the anonymous messengers of managed care condition us to accept interruptions as a way of life. Can anything be done?

The more I think about it, the more strongly I conclude that minding our manners represents a major way by which we can help the image of our profession. Here are ten thoughts on the matter, in no particular order (and how I wish I could always take my own advice!):

- Strive to be punctual.
- Cultivate self-awareness of your own manners and those of others.
- Practice small acts of courtesy, such as letting others in line ahead of you.
- Ask, "Is this a good time for you?"
- Be quick to apologize.
- Set aside downtime in your schedule to return telephone calls and the like.
- Try to get a good night's sleep.
- Remember the Platinum Rule: "Do unto others as they would like done unto themselves."
- Treat your office staff courteously, and make it clear to them how much you value courtesy to patients and everyone else!
- Go out of your way to be courteous on the road, whether or not your car marks you as a physician.

Studies indicate that physicians, even in teaching settings, are reluctant to point out breaches of etiquette. We do not reward good behavior, nor do we penalize bad behavior. We suffer in silence. We perpetuate the cycle by interrupting our colleagues, often out of impatience or laziness rather than true urgency. John D. Rockefeller, Sr., put it well: "A man has no right to occupy another man's time unnecessarily." This simple rule, I think, is the essence of good professional manners. If we could heed it, how much better we would be, both individually and collectively!

A year later, I conclude that the Englishman at North Berwick did me a favor. I wish there were a way to thank him.

Manners matter. Courtesy counts.

—CSB

THE NEED TO QUANTITATE A CLINICAL HUMANNESS

In recent decades, our most respected academic scholars are sensing a need to sift through such elusive terms as personhood, sentience, humanness, and self to standardize what disappears from a dying brain. The modern management of the increasing percentages of vegetative and minimally-conscious patients worldwide has created a delicate need to clarify terms that have long been confined to philosophic and religious literature. It is time to reconsider which labels best summarize the qualities we wish to nurture in critically ill patients. The word humanness is evolving as a logical current choice, but it will take much discussion to standardize methods of calibration.

In contrast, the interesting concept of soul surely evolved over thousands of years to help justify why and how we differ from other anthropoids, quadripeds, and vegetation. But ancient people seldom had an urgent need to establish gradations of *soulness* in societies characterized by rapid death from untreatable infections and violent traumas. Words like soul have incorporated into many religious doctrines, but even today, souls have not been confined to any particular body parts, and have yet to be defined by any modern physiologic techniques. Basal ganglion transplants and, in the near future, cortical transplant will stun any complacent taxonomists.

I. LOCALIZING INITIAL HUMANNESS

a. When gametes touch: This is the common ending of an ambitious journey leading to the creation of fresh chromosomes. But, consider also that a nontraditional laboratory union of human chromosomes was recently described for the first time. Such unions might signal the beginning of humanness, but similar chromosomal events do occur in a wide range of microscopic organisms. It is confusing to suggest that paramecia have any degree of humanness. In recent decades, the trend has been to say that one-celled animals or grasshoppers, or rabbits, etc., may have something called personhood, but no measure of humanness.

b. Initial neurons: A neural plate guides our creation of millions then billions of neurons while a scheduled apoptosis eliminates those that will, for unknown reasons, not be needed. After a programmed number of neurons is reached, our brain volume continues to grow for years by acquiring new dendrites, synapses and myelin, but not neurons.[1] At five weeks, we might know self from nonself, but so might monkeys and cows.

c. The thalamo-cortical core: At six to eight weeks, we develop a first neural network for listening, watching, and instinctive motor responses.[2] This integration provides awareness—often still called consciousness, which is not a measurable property of particles, or any unique channel chemistry. Spinal cords, for instance, transmit sensations but are too primitive ever to provide awareness. Basic scientists may soon be ready to pronounce—for purposes of speculation, that seven billion, seven hundred thousand, and seven hundred mature neurons are required to initiate humanness. The efficiency of synaptic and dendritic activity is obviously important, but a tentative target neuronal number would certainly stimulate discussions about minimal needs.

d. A later milestone: At approximately fourteen months, we have acquired a few billion more synapses on a few billion more synapses on a few million more cortical neurons than any other anthropoid, including giant four-legged mammals. These complex hierarchies of processing can begin to evaluate profiles, shadows, sounds, and movements more precisely and usefully than any other creature. We then would describe ourselves as more intelligent than any other species—in most respects, and humanness has been the most common label we use for this epitome of neural development. We have not agreed on the day—or moment, that this typical intelligence is acquired, but we all agree that there must be such a moment when our innate intelligence is beyond whatever any animal might achieve.

II. LOCALIZING MATURED HUMANNESS.

a. This search for reliable beginning and ending humanness milestones has become dramatically important in recent years as clinical ethicists evaluate practical ways to determine when life-support measures should be initiated or withdrawn.[3]

Vegetative, locked-in, minimally conscious states, and the so-called, "permanent dementias" are modern labels classifying qualities that often seem to be lost in a stepwise fashion. Hundreds of scholarly papers and innumerable bedside discussions have now been designed to clarify these dwindling, end-of-life categories and suggest algorithms for their management. However, we still need legitimate, socially and religiously-sanctioned guidelines for measuring residual humanness. The long established but improper use of the word still does not allow us to refer bluntly to brain dead patients as having lost humanness. Nevertheless, we allow ourselves to administer terminal but not terminating drugs to such patients, while we carefully explain that a death is actually *forseen* but not intended. Our reticent semantics leaves us with a strange awkwardness, e.g., "Mrs. Smith. The important qualities first seen in toddlers, qualities without a scientific name, are what your husband has permanently lost."

b. Current taxonomy: At present, we can only point out to relatives that the desirable traits we are trying to nurture are difficult to quantitate, that we truly respect all of their traditional family customs, and that the old-fashioned word humanness is our most appropriate current label for what has been damaged. Relatives typically offer their own unique examples of what would need to be restored in order to justify continued nurturing. The subsequent intensity of care is then proportionate to our joint estimates of those residual qualities commonly summarized by the term humanness.

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On the Cover:

WILBUR RAYMOND TUTEN, SR., M.D. (1889-1961)

Featured on the cover this month is the President of the South Carolina Medical Association for 1950-1951. W. R. Tuten was born at Ulmers in Hampton County on March 23, 1889. He attended Orangeburg Collegiate Institute and the College of Charleston before entering the Medical College of the State of South Carolina from which he graduated in 1911. Following graduation from medical school, Dr. Tuten entered the practice of General Medicine in Fairfax, South Carolina, where he practiced until his death, November 10, 1961, at the age of 72.

Dr. Tuten was interested in organized medicine from the early days of his practice. In addition to serving on the staff of the Allendale County Hospital, he served as president of the Allendale County Medical Society and president of his district medical society. He was elected Vice President of SCMA for 1948-1949. He also served on the South Carolina Board of Medical Examiners from 1939 until his death. Dr. Tuten's interests extended beyond his medical practice and the medical profession. His community involvement included service on the Board of Trustees of the Fairfax Public Schools, and he was Mayor of Fairfax from 1923 to 1931.

Jane McCutchen Brown
Waring Historical Library

Alliance Page

SCMA ALLIANCE
AMA FOUNDATION 1999-2000

We hope the AMA Foundation will be an important part of your year. AMA Foundation is a non-profit organization established to help support medical education. Since 1950, AMA Foundation has raised over $65 million (SCMAA realized over $40,000 last year) and fostered excellence in education, research, and science. All donations are 100% tax deductible and provide a common thread for local alliances and medical societies to work together. Our donations support:

Medical School Excellence Fund: This money is used to support programs for women and minority students; pay for publication subscriptions, computer software and other equipment; and fund student activities, research programs, guest lecturers and student attendance at national meetings and conferences.

Medical Student Assistance Fund: These funds provide moneys to medical schools to be used for student loans, grants and scholarships. These loans have much lower interest rates than banks.

Development Fund: These funds are distributed by the AMA Foundation Board of Directors to support pilot and experimental health and medical programs.

Categorical Funds: These funds provide support for specific research areas.

The SCMA Foundation: The money in this fund is used to provide scholarships for students from South Carolina.

Our goal this year is $40,000. We have several fun and different ways to reach this goal. Working together, we can continue SCMAA's AMA Foundation success.

This year's prize for our state raffle is a beautiful Rolex Oyster Perpetual Lady's Date Wrist Watch. Tickets are available for $5 each or six for $25.

Also, we encourage all counties to sponsor a Holiday Sharing Card this year. This is a great way to involve all members in making a contribution to AMA Foundation, while providing an easy means of sending a greeting to your medical community.

If you would like to purchase tickets or make a contribution, please fill out the form below and mail to Sarah K. McCraw, SCMAA AMA Foundation Co-Chair, 6 Anthony Place, Greenville, SC 29605. All checks should be made payable to AMA Foundation. You will receive an acknowledgment of your contribution.

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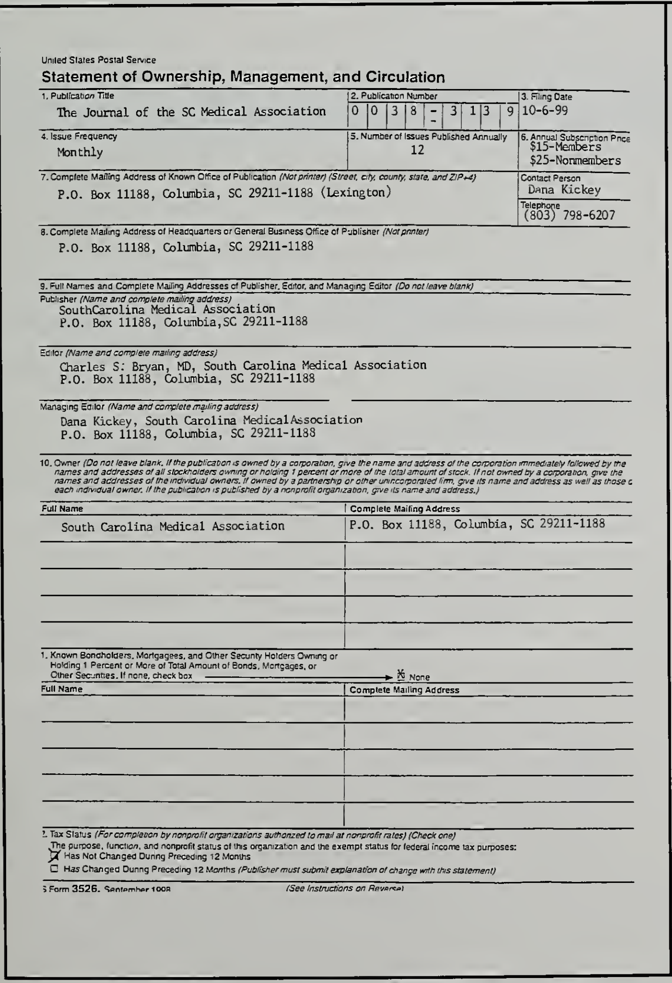

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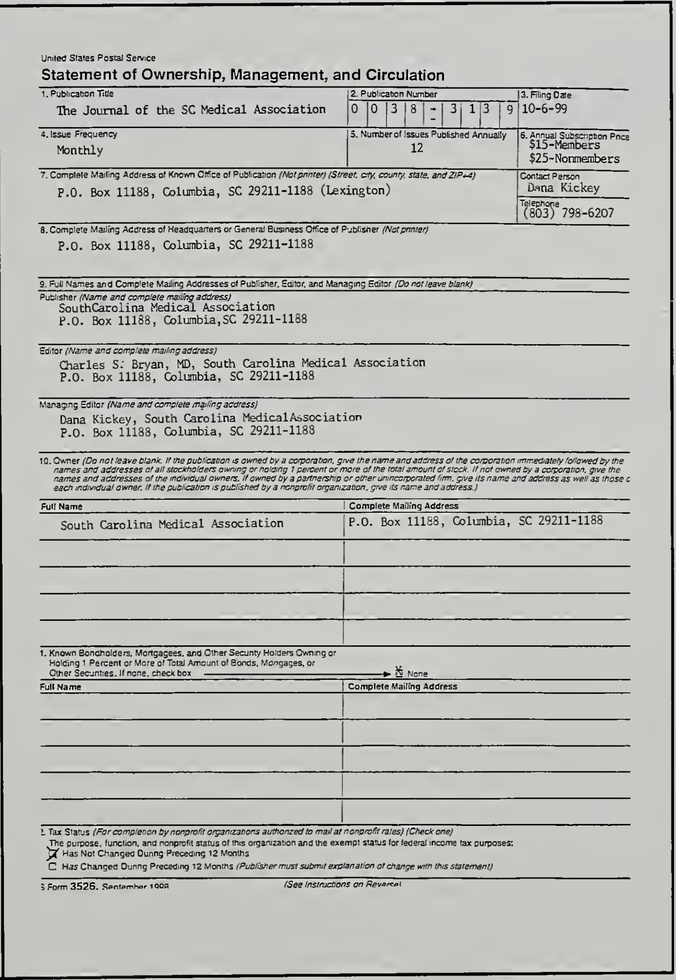

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

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The above example shows the taxes attributable to an annuity for a physician whose home, insurance, qualified plans, and other assets total $2,000,000. Her tax-deferred annuity, for which she invested $100,000, is worth $500,000 at her death. She does not have a surviving spouse so her children are the beneficiaries of her annuity. Her children are in the 35% income tax bracket.

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If you or your spouse own deferred annuities that you never intend to spend during your lifetimes and would like this benefit to go to your heirs rather than to taxes, return this form for additional information.

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PO Box 688
Columbia SC 29202-0688

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Street ______________________________

City ________________ State ____________ Zip ________

Telephone______________________________

Tax Confiscation of Deferred Annuities

Views expressed herein are those of the authors and in no way represent SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

Carolina Physicians
Advisory Service

Billy M. Thornton
John T. Thorne

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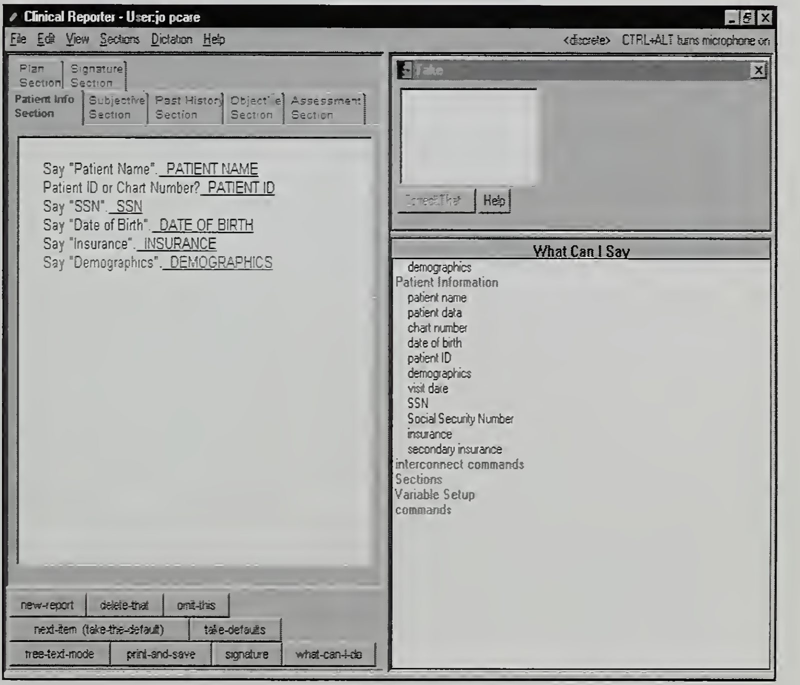

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Say "SSN". SSN
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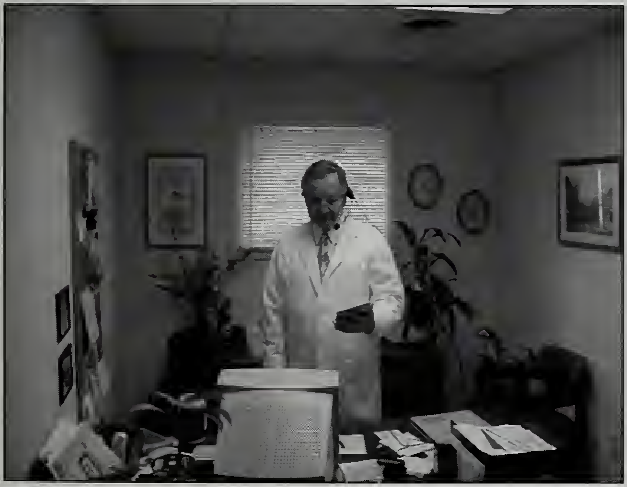

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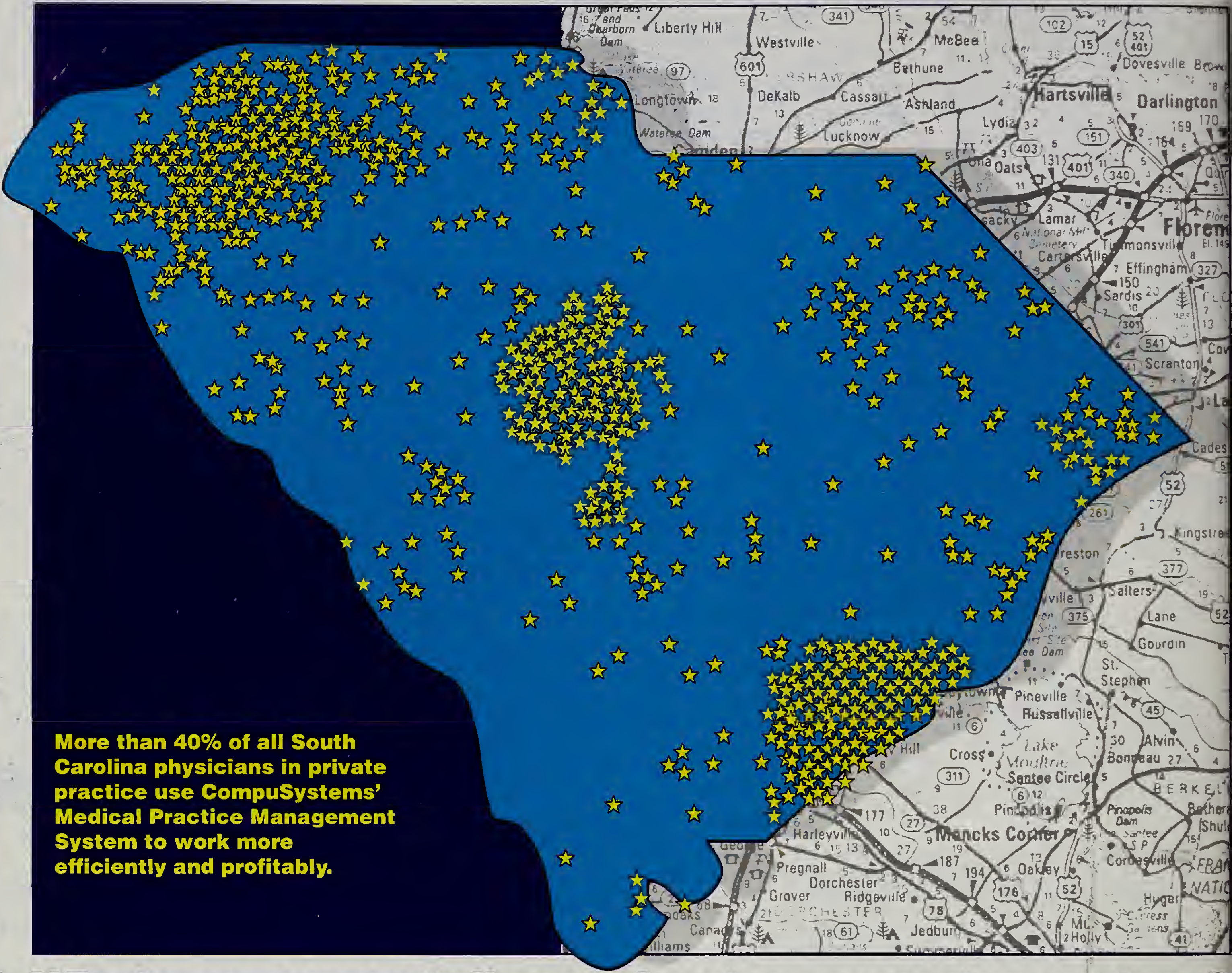

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The Journal
OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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SPECIAL ISSUE—VALVULAR HEART DISEASE IN THE ADULT PATIENT: THE MUSC APPROACH

GUEST EDITOR: MICHAEL E. ASSEY, M.D.
INTRODUCTION BY MICHAEL E. ASSEY, M.D. &
E. CONYERS O'BRYAN, JR., M.D.

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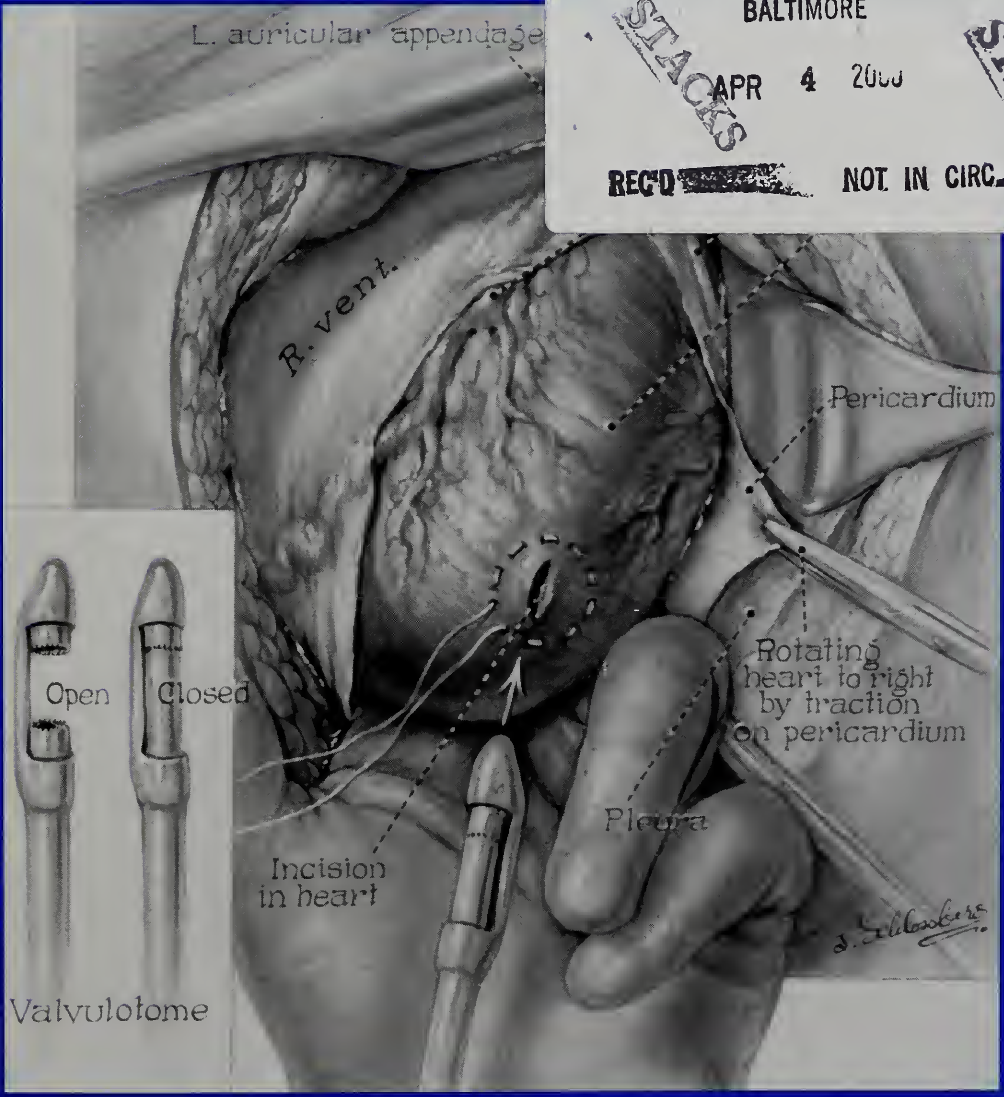

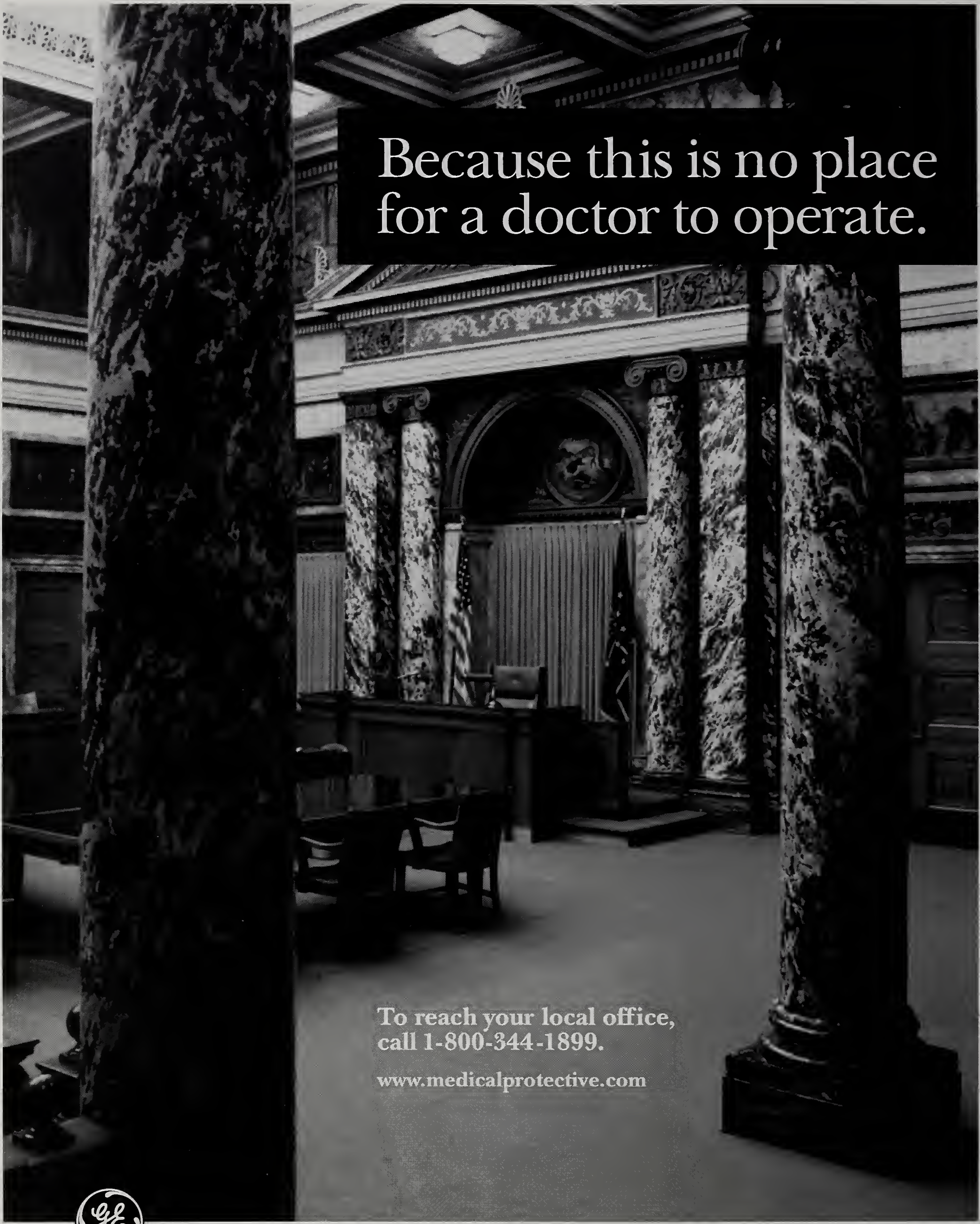
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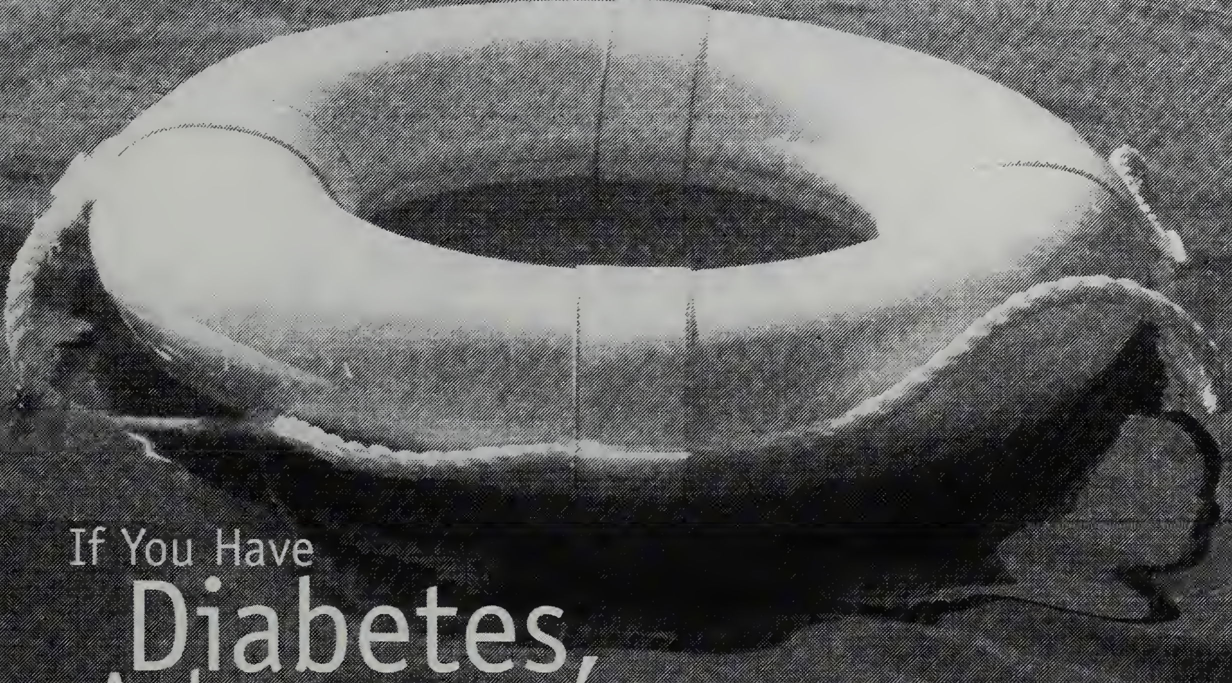

If You Have Diabetes, Ask Your Doctor.

If you live with diabetes, you're more likely to die with the flu. Just ask the families of the 30,000 people with diabetes who died of flu or pneumonia complications. Then ask your doctor for a life-saving flu shot for you and those closest to you, and about the other risks you face when you face diabetes. Because with diabetes, ***prevention is control***, and control is your life line.

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President's Page

NOW IS THE TIME!

In last month's *Journal*, I reported about our imminent success in the U.S. House of Representatives—the passage of the Norwood-Dingell bill that would benefit both patients and physicians. Unfortunately, the days of basking in our legislative victory were short-lived. There is evidently, a contingent within the United States Congress that feels deeply that organized medicine is an "evil empire" and these folks are trying hard to destroy the strides that have been made. Several issues have surfaced recently to lead me to this assumption.

First, the Norwood-Dingell Bill, HR 2723, was passed in the House by a margin of 275-151—a convincing victory. A victory that suggested Americans had spoken through their elected officials telling managed care, "enough is enough!" A conference committee was appointed from the House to meet with the appointed Senate conferees. Only **one** of the twenty-one members appointed to this committee voted **FOR** the Norwood-Dingell bill! The other twenty members voted **AGAINST** the bill! Fair? I don't think so!

Second, the House Judiciary Committee Chairman, Henry Hyde, acting on orders from the speaker's office, cancelled the mark-up of the Campbell Bill, the "Quality Health-Care Coalition Act of 1999." This bill, as you recall, would give antitrust relief to physicians. It was moving along nicely, with 170 cosponsors, including 20 from the Judiciary Committee! Hyde's decision means the bill will not come to pass before the end of this session. When? No one knows, and with each delay, the wind is taken out of the sails of the bill's supporters.

Third, Rep. Tom Bliley (R-VA), Chairman of the House Commerce Committee, is campaigning to hold hearings on the National Practitioner Data Bank, examining the feasibility of opening it to the public. It appears this is to "get back at the AMA" for the position physicians took on HMO reform and recent support of the Norwood-Dingell legislation. Fair? Not a bit. Chairman Bliley has also blocked legislation to correct the inaccuracies in the Balanced Budget Act of 1997. It has been blocked by a failure to mark-up corrective action legislation.

Ladies and Gentlemen of Medicine: if there was ever a time to stand up for your rights in medicine and for the rights of the patients we take care of every day, NOW IS THE TIME! Never before do I remember a time when so many things are going against us in medicine. "These are the times that try men's souls," to coin a phrase from the Kingston Trio's song, the MTA. We need for each of you to send a letter, fax, e-mail or telephone call to your elected representatives telling them how you feel about these issues. If you decide to do so, please send a copy of your correspondence to me at SCMA. We need to let our voices be heard! It doesn't seem right that a few people in the right places can block the desires and the needs of many, but that is the system as it operates.

William H. Hester, MD

William H. Hester, M. D.
President

The Journal™ OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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December 1999
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A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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December 1999

MEDICAID UPDATE

Rate Adjustment for Medicaid Injection Codes
In order to address projected budgetary shortfalls, the South Carolina Department of Health and Human Services must implement an adjustment to the reimbursement rates for injectable drugs. Effective October 1, 1999, injection codes will be reimbursed at the lesser of the current Medicaid rate or Average Wholesale Price (AWP) minus 13 percent. Rates were previously paid by the AWP minus ten percent.

In addition to the drug code, physicians should bill 90782, which includes the syringe, needle, and administration of the drug. Office E/M visits and additional office services are allowed to be billed separately from injection codes. If the administration of the drug is the only reason for the visit, only a minimal established office E/M visit is allowed in addition to the administration code and the drug code. Minimal office visits include the observation time, if indicated.

MEDICARE / MEDICAID COALITION WORKSHOPS

Medicare and Medicaid have both agreed to work with the SCMA to present workshops for our members. The Medical Economics Department at the SCMA has the first workshop scheduled for Wednesday, January 12, 2000 at the SCMA. These workshops at the SCMA headquarters will be free for SCMA members and their staff.

During the workshops, each agency will present updates for year 2000, followed by a question and answer period. Physicians or their office staff may attend either workshop or both.

Medicare 9:00 a.m. to 10:45 a.m. **Medicaid** 11:00 a.m. to 12:45 p.m.

Physician practices are asked to forward any questions they may have for Medicare and Medicaid to Kelly Danias in the SCMA's Medical Economics Department by Thursday, December 30, 1999. Questions may be submitted in typed format via mail, fax, or e-mail. Please contact Kelly Danias at (803) 798-6207, statewide at (800) 327-1021, extension 236, or via e-mail at kelly@scmanet.org to have a registration form sent to you for these free workshops.

MEDICARE UPDATE

Claims With Service Dates Prior to Year 2000.
From January 1 until 17, 2000, claims having dates of service only occurring during the calendar year 1999 or a previous year will continue to be processed and paid using the appropriate payment rates. However, because of the way Medicare's system functions, any claim received from January 1 until January 17, 2000, that includes services occurring during calendar year 2000 and previous years will be held in its entirety until January 17. If you have a claim with dates of service occurring both in 2000 and in a previous year, you should send in two separate claims.

Medicare claims for dates of service January 1, 2000, to January 16, 2000, received during January 1, 2000, through January 17, 2000, will be held and not processed until January 17, 2000. Normal interest rules will apply. The Medicare Physician Fee Schedule Database should follow normal schedule. Provider offices should be ready to file as usual with electronic and hardcopy claims.

Urgent! Y2K Testing Instructions
Palmetto Government Benefits Administrators, LLC asks electronic submitters to begin testing as soon as possible to ensure their computer billing applications can submit

(Medicare, continued on page 4)

ADULT PROTECTION: BUILDING A PROTOCOL

by Mavis Riley

South Carolina may be the first state in the nation to have a medical/legal protocol for vulnerable adult victims of physical abuse, neglect, or chronic sexual assault. When one thinks of abuse, the tendency is to focus on child and spousal abuse. The problems of child and spousal abuse are well documented, and extensive efforts have been made by both social service agencies and law enforcement to combat these activities.

Coming to the forefront, however, is the problem of vulnerable adult abuse. As demographics demonstrate, our population is aging and there is an increased focus on issues dealing with the elderly. Another rarely addressed aspect of abuse, neglect, or exploitation is that these crimes can be perpetrated on other high risk adults such as people with physical or mental disabilities. These vulnerable adults often go unnoticed in any discussion of abuse, neglect, and exploitation.

While a number of persons with disabilities and the elderly are in institutions, more are staying in their local community with social services and medical supports. With increased placement of these vulnerable adults in communities comes the increased exposure to abuse, neglect, and exploitation. Additionally, as more people with disabilities are living and working in communities, and exercising their independence, the risks of being victimized are also increased.

Initiated in December 1995, the Adult Protection Coordinating Council spearheaded an effort to develop a protocol to be completed by physicians and provided to law enforcement as evidence for prosecution in cases of abuse, neglect, and chronic sexual assault of vulnerable adults. The Council was established under the auspices of the Department of Health and Human Services with the passage of the Omnibus Adult Protection Act effective September 1993. The Council was created because of the depth of concern about the need for frequent, continued coordination and cooperation among the entities involved in the adult protection system. The 22-member Council was convened in February 1994, and is composed of 20 public and private organizations and two gubernatorial appointees. Staffing for the Council is provided by the Division of Community Long Term Care. It is believed to be the only council of its type in the United States. At the time research was conducted in 1996, some states had domestic violence protocols; however, no state was found to have a medical/legal protocol for vulnerable adult victims.

The Council established an ad-hoc committee to develop the vulnerable adult protocol utilizing the children's physical abuse and chronic sexual assault protocols as models. All protocols are the property of the State Law Enforcement Division (SLED) and are completed solely for the purpose of evidence collection for prosecution. The Division of Victim Assistance (DOVA), Office of the Governor, has statutory authority and appropriations to reimburse hospitals and physicians for the completion of the protocols.

While diverging from its original mission of protecting vulnerable adults, the initial efforts of the ad hoc committee focused on the development of a comprehensive children's protocol by combining and revising the two existing children's protocols. Based upon this model, the vulnerable adult protocol was developed with extensive collaboration and coordination with SLED, DOVA, physicians, prosecutors, law enforcement, the S.C. Healthcare Alliance, and social service personnel. No changes were made to the acute sexual assault kits for children or adults.

The revised children's protocol was piloted in four children's centers across the state; and in January 1998, the children's protocol was implemented statewide by SLED following training. The vulnerable adult protocol was piloted in five hospital emergency rooms across the state with the pilot ending April 30, 1998. The volume of utilization of the vulnerable adult protocol was very low. A committee has been established to collaborate with SLED, DOVA, the South Carolina Medical Association, the South Carolina Health Alliance, law enforcement, and social services to address the medical staff training needed to implement the protocol statewide.

The protocol will:

- Provide documentation of medical evidence for the prosecution of perpetrators of physical abuse, neglect, and chronic sexual assault of vulnerable adults.
- Enhance prosecutions of crimes against vulnerable adults.
- Provide for a comprehensive medical and physical assessment of the victim.
- Require information and examination of the victim which may otherwise be overlooked.
- Enhance awareness of the problem of vulnerable adult abuse and neglect among physicians and other medical providers and as a result, increase identification and reporting of vulnerable adult victims.
- Serve as an assessment tool to assist physicians in determining the care needs of the victim and provide information that will assist the physician in making appropriate referrals to meet those needs.

Estimating the number of victims for whom a protocol would be completed has been difficult. However, the number is expected to be low and most of the victims will have Medicare and/or Medicaid coverage, thus minimizing the impact on DOVA's budget. The Department of Social Services has estimated approximately 100 cases per year are prosecuted, and therefore would be the cases likely to have a protocol completed. For residents of facilities, the physician may document in the family medical record and a protocol may not be completed.

It is believed the vulnerable adult protection protocol

(Adult Protection, continued on page 3)

PHYSICIANS CARE NETWORK UPDATE

Currently, there are 8,376 participating physician locations, 899 participating ancillary locations and 97 participating hospitals. PCN has 132 contracted groups with 65,140 covered lives. We will continue to provide information as contracts are received.

NEW GROUPS:

- Wire Industries; effective 10-1-99

TERMINATIONS:

- Paradigm; effective 11-1-99
- Ohio Heritage; effective 11-1-99
- Naturechem; effective 11-1-99
- Hyman Paper Company; effective 11-1-99
- Silkworm; effective 11-1-99
- Korn Industries: effective 12-1-99

REMINDER:

DO NOT SEND PHYSICIANS CARE NETWORK NON-PAR CLAIMS!!

Please look on the patient's card for the correct address to send non-par claims. If you are unsure of your participation status, please call Provider Relations Department's toll free number at 1-888-323-9271 or (803) 771-0077 to verify.

NON-PARTICIPATING CLAIMS SENT TO THE WRONG ADDRESS WILL SLOW DOWN PAYMENT OF YOUR CLAIM!

Please remember to keep PCN current with any tax ID or address changes. Please fax that information to PCN attn: Provider Relations 803-771-9474, or mail to the new address as listed below.

REMINDER:

PCN has a new address for mailing of all PARTICIPATING claims:
Physicians Care Network
P.O. Box 101111
Columbia, SC 29211-1111

PCN has a new address for other correspondence:
Physicians Care Network
121 Executive Center Drive
Congaree Building
Suite 203
Columbia, SC 29210

COMING IN JANUARY 2000

Physicians Care Network is implementing EDI capabilities.

WORKSHOPS

BASIC CPT CODING

January 26, 2000

CPT (Current Procedural Terminology) coding is the basis for all payments in a physician's practice. By attending this course, you will become familiar with the types of services represented by this coding system. You will learn how to select codes for your practice, as well as the rules and conventions that guide the use of CPT codes. **Register by January 17, 2000.**

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

BASIC ICD-9 CODING

January 27, 2000

ICD-9-CM (International Classification of Diseases, Clinical Modification) is the standard mechanism for recording the reason for the performance of medical services for physicians and hospitals. Payment from carriers depends on the accurate representation of "medical necessity" through diagnosis coding. This class will cover the ICD-9 coding system and how it is used in physician offices. **Register by January 17, 2000.**

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, ext. 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

(Adult Protection, continued from page 2)

combined with other initiatives of the Council will, over time, raise the level of awareness of the problem of vulnerable adult abuse, neglect, and exploitation and increase prosecutions of perpetrators of these crimes. Greater protection from harm will be afforded the state's most vulnerable citizens who are unable to provide for their own care and protection.

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(Medicare, continued from page 1)

claim data containing future dates to the Palmetto GBA, LLC host. This testing is not intended as a certification mechanism for your computer billing system, but will provide you with a Receipt Listing (Error Report) that relates your system's ability to submit future dates to Palmetto GBA, LLC or indicates the types of front end edit errors incurred by your test submission. The claims data entry product provided by Palmetto GBA, LLC for electronic submitters of Medicare Part B claims, ***PACE-B***, is Year 2000 ready and will send future dates. You are **urged to complete this testing as soon as possible!** The Palmetto GBA, LLC Electronic Media Claims/Electronic Data Interchange Help Line at (803) 788-9751 will address questions regarding testing.

Fax Numbers Have Changed

The Palmetto Government Benefits Administrators, LLC's staff have moved into their new building. Although their telephone numbers did not change, their FAX numbers did.

Education	(803) 935-9182
Provider Certification	(803) 935-0142
Medicare Secondary Payor	(803) 935-1059
Customer Service	(803) 935-0595

Injectable Drug Fee Schedule

The most recent update of Medicare's injectable drug fee schedule was published in the November 1999 *Medicare Advisory*. The fee schedule is updated quarterly. Prices are effective for claims processed on or after December 1, 1999.

The Injectable Drug Fee Schedule is based on the lesser of the median average wholesale price (AWP) of the generic forms or the lowest brand name product AWP. For participating providers, the allowed amount is 95% of the AWP multiplied by the number of units. The non-participating allowance is 95% of the participating allowance. The limiting charge amount is 115% of the non-participating allowance. If you are billing for more than one unit of a particular drug, take 95% of the participating allowance and multiply by the number of units used to get the non-participating amount. Go one step further and multiply the non-participating amount by 115% to get the limiting charge. If you need a price for a code that does not appear in the *Medicare Advisory*, please call the Medicare Part B Customer Service Center at (803) 788-5568.

Note: Currently the Injectable Drug Fee Schedule is updated each quarter on the first of March, June, September and December. Effective January 1, 2000, this schedule will change. The new schedule will result in quarterly updates on the first of January, April, July and October. The January 1, 2000 updates will be published in the 2000 Medicare Physician Fee Schedule.

Multiple (Gang) Visits in Congregate Care Settings

The Health Care Financing Administration (HCFA) has recognized problems in congregate care settings that warranted a special focus in the 1999 Comprehensive Plan for Program Integrity. HCFA recognizes the potential for abuse and/or fraud in these settings in two areas:

1. Services are provided to most or all of a group of congregated beneficiaries, whether or not the service or supplies were medically necessary for the individual patient.
2. Providers may bill for services not furnished because of convenient access to Medicare numbers.

Palmetto GBA, LLC will carefully scrutinize providers who exclusively bill in congregate care settings or who make claims for unreasonable numbers of services within a congregate care setting.

"YOUR WISH HAS BEEN GRANTED"

SCMA Financial Services, Inc., is finally able to expand its product line beyond the realm of physicians. Our new fully insured product is called Central Reserve Life. It is a top quality, national health carrier that already covers over 12,000 lives in the state of South Carolina. Central Reserve Life will also be utilizing our PPO network, Physicians Care Network. This union will make Central Reserve Life extremely attractive to all industries and individuals.

For additional information, please contact Mary Robertson at (800) 327-1021, ext. 401.

MARK YOUR CALENDAR

The SCMA's Annual Meeting and Scientific Assembly is scheduled for April 27-30, 2000, at the Charleston Place Hotel, Charleston, South Carolina.

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VALVULAR HEART DISEASE IN THE ADULT PATIENT: THE MUSC APPROACH

INTRODUCTION

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For over fifty years, the Medical University of South Carolina has been a world leader in valvular heart disease. Before cardiac expertise spread throughout our state, thousands of patients with congenital and acquired valvular disease traveled to Charleston and were followed on a regular basis at the MUSC Heart Clinic. These patients were talked to, examined, and managed by thousands of students and residents who are now practicing physicians in our state. Dr. Horace Smithy, one of the first full-time faculty members of the MUSC Department of Surgery, was a pioneer in cardiac surgery for rheumatic mitral stenosis. In recent years, basic research at the cellular and animal level as well as clinical studies in patients, have answered important questions in patients with valvular heart disease. These include understanding how the heart and its isolated cells respond to pressure and volume overload, determining the optimal time for valve surgery and refining advanced surgical techniques.

Despite a marked reduction in the United States' incidence of rheumatic fever, physicians throughout South Carolina are seeing more patients with valvular heart disease. This is due to many reasons. One is the increased number of elderly patients living long enough to develop degenerative valve disease. A second reason is the increasing number of Asian and Hispanic patients in our state, who come from areas of the world where rheumatic heart disease is still prevalent. In the larger pool of elderly patients, stenosis of a three cusp aortic valve or progression to aortic stenosis/aortic insufficiency of a congenitally bicuspid aortic valve provides the greatest number of aortic stenosis and aortic insufficiency patients. The elderly may also develop mitral insufficiency due to rupture of a chordae tendineae or due to papillary muscle dysfunction secondary to coronary artery disease. In addition, a significant number of patients with dilated congestive cardiomyopathy will have mitral and/or tricuspid insufficiency secondary to ventricular remodeling and subsequent annular dilation. For all of these reasons, it is essential that the practicing physician in South Carolina be able to recognize and participate in the management of patients with various types of valvular heart disease.

This symposium is written for the practicing physician, with the hope that patients with significant valvular disease will be recognized sooner, so that those in need of surgery can be done at an earlier point in the natural history to allow for the best surgical result. Better anesthesia and new techniques of surgery make it possible to operate with a lower morbidity and mortality. This enables less symptomatic patients with better preserved ventricular function to be operated with resulting better long-term results. A major advance has been our ability to repair many valve lesions, preventing the need for chronic anticoagulation when a prosthetic valve is placed. Non-surgical balloon procedures, particularly mitral valvuloplasty, have expanded the indications for earlier treatment. Indeed, mitral valvuloplasty is so successful that it is offered to mildly symptomatic or even asymptomatic mitral stenosis patients when pulmonary artery pressures are elevated at rest or with exercise.

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In the first article of this five-part monograph, Dr. Peter Gazes discusses the history and physical exam. Each of the major cardiac valve disorders is discussed and the variable presentation of acute versus chronic insufficiency of the aortic and mitral valves is emphasized.

The role of non-invasive imaging, especially echocardiography with Doppler, is emphasized in Part II by Dr. Mary Frankis. The last decade has shown dramatic improvement in imaging technology and in our understanding of the natural history of valvular heart disease. Our non-invasive assessment of acute and chronic valvular heart disease is so good, that many consider the primary role of catheterization in these patients to be the demonstration of coronary anatomy.

Despite these impressive non-invasive techniques, most adult patients with valvular heart disease undergo cardiac catheterization prior to valve surgery or valvuloplasty. The role of the heart catheterization is discussed in Part III of the symposium by Dr. Michael Assey. Difficult management problems, such as deciding when to operate in a patient with low gradient aortic stenosis, are discussed. Alternatives to the traditional measurement of aortic valve area, such as the role of aortic valve resistance, reflect research done at MUSC in the recent past.

Dr. Fred Crawford and his colleagues describe current concepts in heart valve surgery. They emphasize the evolution of surgical philosophy and improved technical abilities that have evolved as over 200 patients each year undergo some type of valve procedure at MUSC.

Finally, Dr. Bruce W. Usher, Jr. and Dr. Bruce W. Usher, Sr. conclude the symposium with a discussion of aortic valvuloplasty, detailing the MUSC experience over the past five years. This technique has been discarded by many but still has indications in certain types of patients, namely those not well enough to undergo aortic valve surgery. It is important that a center like MUSC maintains an expertise in this technique to help such patients.

We hope that this symposium raises the level of awareness of valvular heart disease in our state. Physicians are encouraged to look for and refer appropriate patients earlier, thereby allowing them to take advantage of the many recent advances in the care of patients with valvular heart disease.

THE HISTORY AND PHYSICAL EXAMINATION

PETER C. GAZES, M. D.*

MITRAL VALVE DISEASE

Mitral Insufficiency

Mild or moderate mitral insufficiency may not produce symptoms for many years. However, the development of ruptured chordae or bacterial endocarditis may change the picture suddenly into a more severe type with prominent symptoms. Unless one of these events occurs, the patient will remain asymptomatic until the left ventricle begins to decompensate. When this occurs, symptoms of fatigue, weakness, exertional dyspnea, and at times orthopnea develop. Acute pulmonary edema occurs much less frequently with mitral insufficiency than in mitral stenosis. The onset of atrial fibrillation may aggravate the failure and make the patient aware of palpitations.

Clinically, with moderate or severe degrees of regurgitation, beside the high-pitched, blowing, usually holosystolic apical murmur radiating over the precordium into the left axilla and back, there is a marked lift in the left parasternal region (left atrial lift) and a prominent hyperdynamic apical impulse with a left ventricular lift. The atrial lift is more delayed in systole than that of right ventricular enlargement and falls off more rapidly. The murmur does not vary significantly during respiration or with variations in the cardiac cycles. The intensity of the murmur does not correlate with the severity of mitral insufficiency. The first heart sound may be diminished, and because the duration of systole may be shortened, there can be splitting of the second sound due to the early aortic valve closure. In addition, a prominent third heart sound may be present because of rapid filling of the left ventricle in early diastole. This filling wave may be palpable in early diastole. Atrial fibrillation usually develops in the later stages. The murmur of tricuspid insufficiency may be confused with mitral insufficiency but is usually louder with inspiration.

Patients with mitral valve prolapse may be asymptomatic or complain of chest pain, dyspnea and fatigue, palpitations, dizziness, and syncope. Rarely the pain suggests angina. Their dyspnea is rather vague and occurs usually at rest. Palpitations often prompt such patients to see a physician, and many have arrhythmias. Dizziness and syncope can occur, but these symptoms may not correlate with arrhythmias. Transient cerebral ischemic episodes have also been observed.

Patients with mitral valve prolapse often have pectus excavatum or carinatum, straight spine, or scoliosis as noted with Marfan's syndrome. Middle or late systolic clicks alone or followed by a systolic murmur are often noted. Mitral regurgitation is due to the loss of coaptation produced by prolapse of a part of the mitral leaflets. There may be one isolated click or multiple clicks that reach their peak intensity at the time of maximal leaflet prolapse. The murmur is often crescendo or crescendo-decrescendo and may extend through the aortic second sound. The murmur may be musical, sounding like a "whoop" or a "honk." The clicks and murmurs can be variable because they depend on several hemodynamic factors; namely, left ventricular volume, contractility, and systemic blood pressure. Altering these factors can change the auscultatory findings. Any maneuver that makes the left ventricular cavity smaller (decrease in end-diastolic left ventricular volume) will accentuate the degree of prolapse. This includes standing, Valsalva maneuver, submaximal handgrip, and amyl nitrate inhalation. One should listen to the patient lying, standing, and squatting. Left ventricular volume is reduced on standing and leaflet redundancy is more prominent and prolapse occurs earlier in systole, so that the click and murmur occur earlier, toward the first heart sound. In fact, occasionally the auscultatory findings can be noted only on standing. Squatting will increase venous return, systemic vascular resistance, abdominal pressure, systolic blood pressure, and left ventricular end-diastolic volume, delaying the onset of prolapse, and the click and murmur move toward the second heart sound. The loudness of the auscultatory events depends on left ventricular systolic pressure.

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Acute Mitral Insufficiency

The picture of acute mitral insufficiency is one with sudden onset of heart failure (even pulmonary edema), S_4 and S_3 gallops, normal-sized heart, and sinus rhythm rather than atrial fibrillation. The left atrium may be of normal size or moderately enlarged, since the insufficiency is acute, whereas the chronic types produce a huge left atrium. The systolic apical murmur, instead of being the blowing pansystolic type, may be rather harsh and of the ejection type. The murmur may be decrescendo and stop before the second sound because the pressure gradient between the left ventricle and atrium declines at the end of systole in view of the very high V wave. If the chordae of the posterior leaflet are involved, the murmur may be referred to the aortic area simulating aortic stenosis. If there is rupture of the chordae of the anterior leaflet, the murmur can be transmitted posteriorly to the spine and can be heard at times on the top of the head. A systolic thrill may be palpated at the apex, and the apical impulse can be hyperactive.

Mitral Stenosis

The main symptom of mitral stenosis is dyspnea. Pulmonary alveolar congestion or interstitial edema of the lungs produces dyspnea. At the beginning the dyspnea may be exertional. This gradually increases to the point where it occurs with little activity. Orthopnea may develop later. In addition, nocturnal cough becomes a prominent feature. Hemoptysis usually indicates early pulmonary venous hypertension. Later, with increasing venous hypertension, the bronchial veins become thickened and less likely to break and produce hemoptysis. At times the patient may have pulmonary edema, and the diagnosis is overlooked because the murmur is obscured by the wheezing. One should suspect mitral stenosis in a young person who develops sudden pulmonary edema associated with pregnancy, intercourse, physical exertion, or emotional trauma. In the past many patients with mitral stenosis have been treated for chronic bronchitis and pulmonary infections. These latter findings are often associated with the chronic venous hypertension of mitral stenosis. The dilated left atrium and pulmonary artery can compress the left recurrent laryngeal nerve and cause hoarseness (Ortner syndrome). Atrial arrhythmias may make the patient aware of palpitations. A systemic embolism may produce the first symptoms. Rarely, a ball valve thrombus can develop and produce syncope. The patient may have the mitral facies, pinkish-purple cheeks. This type of patient usually has a low cardiac output and systemic vasoconstriction secondary to severe mitral stenosis. The arterial pulse is usually normal and the jugular venous pulse may show a prominent “A” wave, if there is sinus rhythm and elevated pulmonary vascular resistance. A right ventricular lift may be present, and a diastolic thrill may be palpable at the apex, especially in the left lateral recumbent position. A very large right ventricle can produce an apical impulse that may be interpreted as a left ventricular lift. In such cases the left ventricle is small and is displaced posteriorly. The second sound is usually loudest in the pulmonic area, and the first sound is loud at the apex (when the mitral valve is flexible). An opening snap, related to abnormal mitral valve with its abrupt recoil, may be audible along the left sternal border (0.03 to 0.12 seconds from the second heart sound). The closer the opening snap is to the second heart sound, the tighter is the stenosis and the more elevated is the left atrial pressure. However, cardiac output, valve calcification and mobility, left ventricular systolic pressure, left atrial pressure and heart rate can cause variations in this interval.

The diastolic murmur of mitral stenosis is a low-pitched, rumbling murmur and is often heard best in the left lateral position at the apex with the bell of the stethoscope applied lightly to the chest. It begins after the opening snap. If regular sinus rhythm is present, there is presystolic accentuation of the murmur due to atrial contraction. With severe stenosis the murmur may be long. Atrial fibrillation will cause the murmur to be shorter and in mid-diastole; however, there can be presystolic accentuation. Progressive narrowing of the mitral valve opening after the onset of left ventricular contraction, with resulting increased velocity of flow as the valve closes, can produce the presystolic murmur even though atrial fibrillation is present.

If the valve becomes severely calcified and fixed, the opening snap disappears and the intensity of the murmur may be much reduced. Pulmonary hypertension secondary to mitral stenosis rarely produces pulmonary valvular regurgitation (Graham Steell murmur). Likewise, secondary tricuspid insufficiency rarely occurs. Pulmonary hypertension can produce right ventricular overload and eventually ascites and edema.

Aortic Insufficiency

Symptoms such as exertional dyspnea, paroxysmal nocturnal dyspnea and orthopnea usually occur when there is significant cardiomegaly and myocardial dysfunction. Angina is rare but can occur nocturnally when the heart rate slows and arterial diastolic pressure falls to a very low level. Syncope is also very rare. With severe aortic insufficiency patients may complain of pulsations in the neck and pounding in the chest. The pulse pressure is wide and correlates well with the degree of aortic insufficiency unless advanced heart failure is present. The peripheral pulses are classically bounding with a brisk upstroke and rapid decline (water-hammer or Corrigan's pulse). This can best be detected by clasping the patient's wrist over the radial pulsation and raising the patient's arm high. Carotid pulsations can produce bobbing of the head (deMusset's sign) and pistol-shot sounds (Traube's sign). Capillary pulsations in the nail beds with pressure on the nail or capillary pulsations by pressing a glass slide on the patient's lip (Quincke's sign) and a systolic and diastolic murmur heard over the femoral artery with pressure of the stethoscope (Duroziez's sign) are other findings noted with aortic insufficiency. At times, the uvula can pulsate during systole (Müller's sign). The blood pressure in the legs may be excessively elevated (over 60 mmHg) as compared with the arms (Hill's sign). At times, the carotid and peripheral pulses may be bifid (bisferiens pulse).

A hyperactive left ventricular apical lift is present due to the overfilled left ventricle. The murmur of aortic incompetence is usually high-pitched, blowing, and begins almost with the second sound and is decrescendo. It is usually best heard with the diaphragm at the end of expiration in the primary aortic area or at the right or left sternal border (Erb's area) with the patient sitting and leaning forward. It can radiate to the apex and occasionally may be heard only in that area. The longer duration in diastole the murmur occupies, the more severe is the aortic insufficiency. However, congestive heart failure with decrease in left ventricular stroke volume can result in a decrease in intensity and length of the diastolic murmur as well as attenuation of the peripheral pulses, so that the degree of aortic regurgitation will be underestimated. When the murmur is associated with primary valvular involvement, it usually is heard best along the left sternal border, and when associated with dilatation of the ascending aorta, it is best heard along the right sternal border. Any intervention that raises the blood pressure will accentuate the murmur. An aortic ejection sound may be audible if the valve is not severely calcified. Because of the increased stroke volume, most patients will have a systolic flow murmur in the primary aortic area, with radiation into the neck. This murmur can produce a systolic thrill in the supraclavicular area without the patient having any degree of aortic stenosis. A thrill may be associated with the aortic diastolic murmur if there is prolapse, eversion, or perforation of the leaflets. Eversion or perforation of the leaflets can produce a "cooing" or musical murmur. A ventricular gallop may be present. A low-pitched, presystolic, mid-diastolic or holo-diastolic rumbling murmur may be heard at the apex with severe aortic insufficiency (Austin Flint murmur). The regurgitant jet of aortic insufficiency against the anteromedial mitral valve leaflet impedes the flow from the left atrium into the left ventricle, and also the rapidly rising left ventricular diastolic pressure (associated with filling from the aorta and left atrium) impedes the opening of the mitral valve, producing this functional diastolic murmur. These patients usually have large left ventricles and are in failure. The Austin Flint murmur may simulate mitral stenosis. Unless there is marked left atrial enlargement, loud first sound, or an opening snap, it may be difficult to differentiate these. The Austin Flint murmur is usually preceded by an S_3 gallop rather than an opening snap, and the S_1 is normal or decreased in amplitude. An S_3 gallop can indicate severe aortic regurgitation or depressed left ventricular function. Increasing the blood pressure can augment the Austin Flint murmur, and amyl nitrite can reduce it. The murmur of mitral stenosis will increase in intensity after giving amyl nitrite.

Acute Aortic Insufficiency

The sudden development of severe aortic insufficiency can produce a serious event, since a normal or mildly enlarged left ventricle from prior disease is presented with increased work and volume but without time for compensatory dilatation and hypertrophy. This can result in a high ventricular end-diastolic pressure, which may approximate the aortic diastolic pressure, and thus the aortic diastolic murmur may be short and soft. In addition, early mitral valve closure can occur without requiring muscular contraction when the ventricular end-diastolic pressure exceeds the left atrial pressure. The first heart sound can become soft or even absent. A brief Austin Flint murmur and S_3 and S_4 sounds may be present. The pulse pressure will not widen, and the peripheral findings of chronic aortic insufficiency are not present because these signs are due to the great increase in left ventricular stroke volume that does not occur until the ventricle has time to dilate due to eccentric cardiac hypertrophy. These patients often have sinus tachycardia, peripheral vasoconstriction, and at times cyanosis. Acute pulmonary edema can occur because of the pulmonary venous hypertension.

Aortic Stenosis

The three main symptoms that usually develop are dyspnea, angina, and syncope. There is usually a long latent period, depending on the etiology and degree of stenosis, prior to these symptoms developing. However, most often they occur later in the course of the disease at about the fifth or sixth decade. The frequency of angiodysplasia of the colon is increased in patients with calcific aortic stenosis and can produce gastrointestinal bleeding. Microthrombi or thickened valves or calcium may cause embolization.

When overt heart failure (diastolic, systolic dysfunction or a combination) develops, the prognosis is usually poor, and life expectancy is about two years. Once angina occurs, life expectancy is about five years and three years with syncope. Syncope or dizziness may occur at rest or on effort. Sudden death is a concern with severe aortic stenosis, but in adults, it is rare especially in the presence of a normal ECG. By the time the patient is symptomatic and has critical stenosis, there is usually a peak-to-peak systolic gradient across the aortic valve of 50 mm Hg or more or a valve orifice area of 0.75 cm^2 or less or 0.4 cm^2/m^2 BSA or less. Naturally, a decline in cardiac output will reduce the gradient.

The carotid pulse is of small amplitude, and the upstroke is delayed and gradually falls (pulsus parvus et tardus). A pulsus bisferiens (bifid carotid pulse) may be present when there is both aortic stenosis and insufficiency. The pulse pressure may become narrow, but this is usually a rather late sign of severe aortic stenosis. Patients can have hypertension and significant aortic stenosis but seldom is the systolic over 200 mmHg. At the apex there is a sustained left ventricular lift (felt into the last part of systole, whereas the normal apical impulse retracts from the chest wall during most of systole) and palpable S_4 gallop.

The aortic component of the second sound is often diminished because of fibrosis and calcification of the valve. The weak A_2 may be superimposed on the P_2 because of the delay in left ventricular ejection giving one sound, or it may be just P_2.

With severe aortic stenosis the second sound may be paradoxically split with expiration. If the valve is not calcific, an aortic ejection sound is audible, which is usually best heard in the primary aortic area and at the apex. It is a high-frequency sound, occurring immediately after S_1, and coincides with the maximum opening or doming of the aortic leaflets. An S_4 gallop may be present early, and later, an S_3 gallop.

The obstruction caused by aortic stenosis produces a harsh ejection systolic murmur (simulating a bulldog's bark or someone clearing his throat), which gives a diamond-shaped appearance in the phonocardiogram. The longer the murmur and the later its peak, the more severe the stenosis. Severity is not usually related to intensity. The murmur is often maximum at the right second intercostal space in the primary aortic area and is usually well transmitted to the neck and also at times to the bony prominences, even to the elbows. It is often associated with a systolic thrill, which may first be felt in the sternal notch. Thrills in the primary aortic area are usually best felt while the patient is sitting up and leaning forward with his breath held at the end of expiration. At times this thrill is palpable over the carotids (carotid shudder). Frequently the murmur can be higher-pitched and musical as it radiates to the apex (Gallavardin phenomenon), making it difficult to exclude associated mitral insufficiency. However, the Gallavardin effect retains the diamond-shaped contour of the murmur. Sometimes, especially in the patient with emphysema, the murmur of aortic stenosis may only be heard at the apex and must be differentiated from primary valvular mitral insufficiency. However, it is of the ejection type at the apex and is heard into the neck. If the rate varies, as it would following a premature beat, the murmur of aortic stenosis as well as its Gallavardin effect will become louder after the long cycle, whereas the murmur of mitral insufficiency will not change. The murmur of aortic stenosis can decrease in intensity with heart failure and a fall in cardiac output, but it usually will retain its length in systole. Often there will also be a murmur of aortic insufficiency, even though it has no hemodynamic significance.

Aortic Stenosis in the Elderly

Aortic stenosis is not uncommon in persons 65 years of age and older, and is usually due to degenerative changes rather than to congenital bicuspid aortic valve or rheumatic fever as seen in younger patients. The severity of aortic stenosis in the elderly is frequently difficult to assess because the clinical findings may not be the same as in the younger patients. The elderly may not have a slow carotid upstroke, narrow pulse pressure, decreased or absent aortic closure sound, and a left ventricular lift may not be detectable because of emphysema. The systolic pressure can be elevated because of the loss of arterial elasticity due to sclerosis. Often the systolic murmur is not intense in the aortic area, but there may be a loud systolic musical murmur along the left sternal border and at the apex. The duration of the murmur (even though late peaking may be absent because of the absence of a jet lesion) may be helpful for suggesting significant stenosis, since many elderly patients (75 percent over 70 years of age) have aortic systolic murmurs of short duration that are due to sclerosis or dilatation of the aorta rather than stenosis. Atrial fibrillation is more commonly noted in elderly patients with aortic stenosis compared with the younger group.

TRICUSPID VALVE DISEASE

Tricuspid Insufficiency

One should suspect tricuspid insufficiency (especially in a patient with known left ventricular failure or mitral disease) if the patient notes increasing peripheral edema, abdominal swelling, and less dyspnea and orthopnea. The neck veins are often a clue to the diagnosis because of the prominent C-V deep jugular pulsation. In fact, at times this pulsation can even raise the lower portion of the ear lobe and may be mistaken for an arterial pulsation. When the patient lies down, the face has a cyanotic tinge, the frontal vein is prominent, and the patient complains of a throbbing fullness in the neck and head. A hyperdynamic right ventricular lift may be present. A holosystolic, high-pitched, blowing murmur can be present in the xiphoid area, along the left sternal border at the fourth intercostal space or because of a large right ventricle at the apex. Acute forms of tricuspid insufficiency may give only a short murmur or no murmur. In contrast to mitral insufficiency, the murmur of tricuspid insufficiency usually increases with inspiration (Carvallo's sign) unless there is marked right ventricular dysfunction. A right ventricular S_3 gallop (louder with inspiration) may be present. The liver is enlarged (often painful) and may have systolic pulsations. Often a pulsatile liver cannot be distinguished from pulsations due to the abdominal aorta. One can be certain that the pulsation if from the liver if, by pressure on the liver anteriorly, a liver pulsation can be felt with the other hand posteriorly just below the ribs. Ascites can be present and at times there is jaundice.

Footnote: Some of the material presented is based on my book *Clinical Cardiology*, 4th edition, and is used with permission from Edward Arnold Publishers Limited.

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ECHOCARDIOGRAPHY IN THE DIAGNOSIS AND FOLLOW-UP OF VALVULAR HEART DISEASE

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Echocardiography is a sensitive, accurate and noninvasive means by which to diagnose valvular heart disease and to follow the patient in a serial fashion. With the techniques of two-dimensional (2-D) echocardiography, interrogation of the valves allows for the formulation of detailed information on structure, anatomy and function. Further functional and hemodynamic information is gathered by Doppler imaging, which relates frequency shifts of transmitted and reflected ultrasound waves to the velocity of blood flow.[1]

With complete 2-D and Doppler measurements, the severity of stenosis or regurgitation can often be determined with such a degree of accuracy as to obviate the need for invasive cardiac catheterization procedures. Since transthoracic echocardiography (TTE) allows for serial, noninvasive studies, it can be invaluable in the timing of surgical intervention. (See Table 1) An invasive procedure with transesophageal echocardiography (TEE) is sometimes needed when more detailed data about valve structure/function is not obtainable by TTE examination. Although TEE can provide better visualization of valvular morphology, it is not well suited for serial examination since it requires a fasting state for esophageal intubation, intravenous conscious sedation and carries an increased risk versus TTE.

DIAGNOSIS

A murmur identified on cardiac auscultation is often the first indication of underlying valvular heart disease, as the patient may be asymptomatic for many years. However, often times the murmur auscultated by physical examination of the patient is an innocent or "flow murmur" caused by turbulence of blood flow through structurally normal valves.[2] Furthermore, in the aging population, aortic valve sclerosis becomes more common and can result in a prominent murmur even when no significant stenosis or regurgitation exists.[2] Echocardiography can effectively differentiate the pathological from functional murmurs and becomes a valuable supplement to physical examination findings.

Once it has been determined that the patient indeed has a pathological murmur, the echocardiography exam can accurately quantify the severity of lesions and often the underlying etiology of the abnormality. The presence of degenerative changes secondary to rheumatic disease, fibrosis, calcification and prolapse result in characteristic findings on echocardiography. Important information regarding ventricular function, chamber dimension, and pulmonary artery pressures can also be obtained. Such information can help in the decision concerning such issues as appropriate medical therapy, endocarditis prophylaxis and frequency of patient follow-up visits. Several major valvular lesions will be addressed in the following sections.

MITRAL VALVE DISEASE

Mitral Valve Prolapse

Mitral valve prolapse, though less common than previously believed, is still estimated to afflict one to two percent of the population.[3] With echocardiography, the redundancy of the valve leaflets and degree of prolapse can be visualized. Associated mitral regurgitation can be identified. The degree of redundancy of the valve and the presence of mitral regurgitation have prognostic significance and influence the decision regarding necessity for endocarditis prophylaxis.[4] The most recent AHA/ACC guidelines for endocarditis prophylaxis suggest that when structurally normal valves prolapse or prolapse occurs without regurgitation, the risk of endocarditis is not increased.[4] Significant mitral regurgitation on Doppler examination does correlate with increased prevalence of subsequent complications such as CHF or atrial fibrillation.[5]

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Mitral Stenosis

There are several echocardiographic parameters utilized in the evaluation of mitral stenosis (MS). Typical findings on 2-D echocardiography distinguish the structural changes that occur secondary to rheumatic degeneration, the most common etiology of MS. Since the commissural edges of the mitral leaflets tend to become fused, a typical finding on echocardiography is the restricted motion of the leaflets. This restriction can look like a bend at the tip of the leaflet in diastole that has been described as "Hockey Stick" in appearance.[6] The degree of mobility of the valve, subvalvular thickening, leaflet thickening and leaflet calcification can be assessed semi-quantitatively and a summed score has been developed to help grade the morphologic derangement and to predict success of percutaneous mitral valvotomy.[7] Frequently, the valve areas can be estimated by planimetry of the orifice in parasternal short axis view,[6] but this can be difficult if the valve is heavily calcified. Associated 2-D findings of functionally significant mitral stenosis include left atrial enlargement and right ventricular enlargement.

On Doppler imaging, the severity of stenosis can be estimated through several hemodynamic parameters (Table 2). As stenosis severity increases, the Doppler velocity across the mitral valve in diastole increases and reflects an increased pressure gradient. Pressure gradients can be determined from velocity measurements (V) in a quantitative fashion by employing the modified Bernoulli equation: ΔP (the pressure gradient) = $4 \times V^2$.[6] Similarly the rate of pressure decay across a stenotic mitral valve is also prolonged. This observation was utilized by several investigators to estimate mitral valve area (MVA) by correlating area calculated by catheterization data with Doppler velocity measurements.[1] The equation that correlates MVA with Doppler velocity measurement is derived by linear regression analysis of the observed data. In this equation MVA = 220/PHT, where PHT (pressure halftime) is the time for peak mitral inflow pressure to decay to one-half the original value.[6]

Mitral Regurgitation

The structure of the mitral valve apparatus is usually well defined on transthoracic echocardiography and therefore it is often possible to infer whether regurgitant lesions are secondary to mitral valve prolapse, endocarditis, chordal rupture, annular dilation, mitral valve degenerative disease or other underlying etiologies. However, defining the precise degree of regurgitation is often more problematic since Doppler measurements represent velocity of blood flow and not directly the regurgitant volume. Since the hemodynamic impact of regurgitation depends on the volume (regurgitant fraction), it becomes the task of the echocardiographer to convert Doppler velocity and Doppler color flow recordings to estimates of the severity of regurgitant volume. This is often a more subjective interpretation than that of valvular stenosis. For instance, the area of the mitral color flow

	MR	AR
Ejection Fraction	<60%	<50%
Left Ventricular End Systolic Diameter	>45 mm	>55 mm
Left Ventricular End Systolic Volume	>160 ml/m^2	>220 ml/m^2
Shortening Fraction	<0.32	<0.27

Table 1 - Indications for Surgery in Valvular Regurgitation

LESION	ECHO DOPPLER FINDINGS
Aortic Regurgitation (AR)	SEVERE: area of AR jet >60 % of area of LVOT; PHT <250 msec MILD: Area of AR jet < 30% of area of LVOT. PHT >400 msec
Aortic Stenosis (AS)	SEVERE: Mean gradient > 50 mm Hg Valve area < 0.75 cm^2 Systolic flow velocity > 4.5 m/sec MILD: Mean gradient usually < 20 mm Hg Valve area > 1.0 cm^2
Mitral Regurgitation (MR)	SEVERE: Area of MR jet/area of LA >40% Effective Regurgitant Orifice = ≥ .35 cm Regurgitant Fraction = ≥ 55% MILD: Area of MR jet/area of LA <20%
Mitral Stenosis (MS)	SEVERE: PHT > 220 msec Mean pressure gradient > 12 mm Hg Valve area < 1.10 cm^2 MILD: PHT ~ 110 to 140 msec Valve area 1.6 to 2.0 cm^2

Table 2

regurgitant jet relative to left atrial size has been correlated to regurgitant severity as determined by angiography.[8] However, the area of the regurgitant jet may be influenced by technical factors (e.g. gain settings of the equipment) and loading conditions (e.g. blood pressure).[6] Newer methods such as the PISA method (proximal isovolumetric surface area) offer the potential improvement in the quantification of regurgitant volume and effective regurgitant orifice (Table 2). However, the time and technical expertise required for accurately obtaining all the necessary measurements have limited the utility of this measurement in most laboratories. For a more complete description, the reader is referred to previous reviews of the PISA technique.[6] Often the echocardiographer is left to incorporate several features from 2-D and Doppler interrogation, including color flow size and penetration of the jet into the LA, PISA, LA size, pulmonary artery pressure, LV size and function prior to making a final interpretation of severity.[9] Transesophageal echocardiography has been utilized more frequently in an effort to improve the assessment of severity of mitral regurgitation.[10] The valvular structure can be seen with superior resolution, even in patients with suboptimal transthoracic images. Furthermore, one can more easily determine systolic pulmonary venous flow reversal which has been useful in determining the severity of regurgitation.[11]

AORTIC VALVE DISEASE

Aortic Stenosis

Several studies have been performed which showed an excellent agreement in the determination of aortic valve stenosis severity by echocardiography as compared to hemodynamic measurements at cardiac catheterization.[12] It has been suggested, therefore, that the severity of aortic stenosis can be gauged accurately by echocardiography, and cardiac catheterization may only be needed to define coronary anatomy.[13]

On echocardiography, aortic stenosis can be defined by estimation of the transvalvular gradient ($\Delta P=4V^2$) or by calculation of valve area by the continuity equation.[6] The continuity equation is based on the concept that flow across the left ventricular outflow tract is the same as that across the stenotic aortic valve (AV). Although flow is conserved, the velocity (Vel) across the stenotic valve is increased as compared to velocity across the left ventricular outflow tract (LVOT). If the LVOT diameter (D) is accurately measured, then the aortic valve area (AVA) can be calculated as AVA (cm^2) = $D^2 \times 0.785 \times \frac{\text{LVOT Vel}}{\text{AV Vel}}$. Significant aortic stenosis is usually reflected in a calculated mean transvalvular gradient > 50 mm Hg or an AVA < 0.75 cm^2 (Table 2).

In the setting of low cardiac output and ventricular dysfunction, calculated aortic valve areas may be inaccurate—either by catheterization or echocardiographically derived data. Manipulations by inotropic agents and nitroprusside have been done in the catheterization laboratory.[14] In a similar fashion, dobutamine echocardiography may also be useful in distinguishing critical from noncritical aortic stenosis in patients with depressed ventricular function and low resting transvalvular gradients.[15]

Aortic Regurgitation

Similar to problems with the estimation of the severity of mitral regurgitation, determination of the degree of aortic regurgitation (AR) can be more subjective than estimation of the severity of stenosis. Estimates of aortic regurgitation by catheterization correlate best with the relative width or area of the color flow insufficiency jet as compared to the area or width of the aortic annulus.[16] The length of the aortic insufficiency jet into the left ventricle was poorly correlated with the angiographic severity of AR.[6] With more severe regurgitation the deceleration time of the aortic insufficiency jet shortens, reflecting a rapid rise in the LV diastolic pressure (Table 2). One can also look for associated findings that result from the pressure and volume overload of the left ventricle. The hemodynamic consequence of significant aortic insufficiency leads to left ventricular chamber dilation and finally to progressive left ventricular contractile dysfunction, both of which can be estimated by echocardiography.[6]

RIGHT-SIDED VALVULAR DISEASE

Tricuspid and pulmonic valvular disease can be identified on echocardiography and the effects on right ventricular size and function can be determined in a similar fashion to left sided lesions. In addition, right-sided valvular regurgitation may be secondary to a consequence of pulmonary hypertension and right ventricular pressure overload. Pulmonary artery pressures can be accurately estimated by echocardiography as: Peak pulmonary systolic pressure = $4\ V^2 + RA$, where peak velocity is measured across the tricuspid valve in systole (if TR can be identified) and RA is the clinician's estimate of RA pressure (usually 5 to 10 mm Hg).[6]

ENDOCARDITIS

The role of echocardiography in endocarditis deserves special consideration, as the technique has become an integral part of the current diagnostic schemes. In 1994, criteria for the diagnosis of endocarditis were published that included the utilization of specific echocardiographic findings.[17] Follow-up studies confirmed an improvement in sensitivity and specificity in the Duke (1994) as compared to the Von Reyn criteria[18,19] which did not include findings on echocardiography.

The Duke criteria considered echocardiography to provide major clinical criteria for the diagnosis of infective endocarditis if the echo study revealed an oscillating mass on the valvular apparatus, an abscess, new partial dehiscence of a prosthetic valve or new valvular regurgitation. Since transesophageal (TEE) echocardiography has improved resolution and sensitivity in detection of vegetations, some investigators have stated that TEE is essential for the diagnosis of endocarditis.[20] However, the exact role of TTE and TEE has yet to be conclusively determined and, as with all clinical problems, the pretest likelihood effects the predictive accuracy of the test. Certainly, a TEE can better visualize abscess formation and may be needed to help overcome the limited visualization often encountered with prosthetic valves. Since the tricuspid valve, pulmonic valve and velocity gradients can often be better interrogated by TTE, the TEE and TTE should be considered complimentary studies, with one not necessarily superior to the other.

TIMING OF SURGERY AND FOLLOW-UP OF THE POST-OP PATIENT

Much has been written and good reviews exist discussing the issue of timing of surgery for valvular heart disease.[21] There are several parameters on echocardiography that indicate occult LV dysfunction and suggest the need for surgical intervention, even in the asymptomatic patient (Table 1). Serial follow-up echocardiograms can be useful to monitor for left ventricular dilation, systolic dysfunction and for increases in severity of the regurgitation.

Once a patient has undergone surgical repair or replacement, an echocardiographic assessment will help establish baseline hemodynamics and left ventricular function. Most commonly used prostheses, both bioprosthetic and mechanical, are inherently mildly stenotic with somewhat elevated pressure gradients. Mild degrees of regurgitation are not uncommon. It is therefore helpful to establish these baseline measurements so that comparison studies can be made more meaningful.

In summary, echocardiographic assessment of valvular heart disease has resulted in the ability to achieve earlier accurate diagnosis and to provide close follow-up. In general, the evaluation of stenotic lesions with echocardiography is more precise and less subjective than that of regurgitant lesions.

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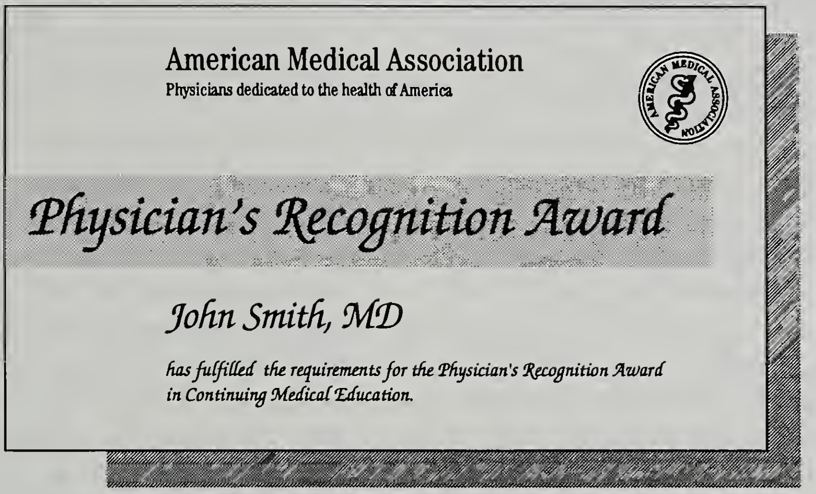

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HEART CATHETERIZATION IN THE PATIENT WITH VALVULAR HEART DISEASE

MICHAEL E. ASSEY, M.D.*

INTRODUCTION

As a general rule, adult patients with valvular heart disease undergo cardiac catheterization prior to considering cardiac surgery. This is despite the fact that our non-invasive assessment is quite good at identifying and grading the degree of valvular disease. At cardiac catheterization, the patient's primary valvular lesion is identified and quantified. Other valve lesions, often secondary to the primary valve disorder (such as functional mitral insufficiency in a patient whose left ventricle has dilated due to aortic valve disease) are identified. Pulmonary pressures and pulmonary vascular resistances are measured. Left ventricular systolic and diastolic function is assessed. The coronary arteries are imaged and important coronary artery disease, which would require bypass surgery at the time of valve surgery, is identified or excluded.

The optimal management of the patient with valvular disease requires that the clinician evaluate both non-invasive data and data obtained from the catheterization procedure. Consequently, the clinician should understand limitations and pitfalls of information obtained from these sources.[1]

AORTIC VALVE DISEASE

Adult patients with symptomatic aortic stenosis undergo cardiac catheterization prior to intervention. Typically, this "intervention" will be aortic valve replacement with the choice of prosthesis based on the patient's age, co-morbidity and ability to tolerate chronic anticoagulation required with a mechanical valve. On rare occasions, balloon valvuloplasty for aortic stenosis is recommended, and this is discussed in another section of this symposium.

The catheterization of the patient with aortic valve disease (stenosis, insufficiency or both) begins with an assessment of right and left-sided cardiac pressures. Particular attention is paid to the transvalvular aortic gradient and measurement of cardiac output. With a properly measured cardiac output and simultaneously determined aortic valve gradient, the aortic valve area is calculated. Aortic stenosis patients who are symptomatic with an aortic valve area of less than 1.0 cm^2 will need surgery. Occasionally, a patient will be referred for surgery with a larger valve area, as in the case of a large patient whose indexed valve area is small or perhaps someone with concomitant severe coronary artery disease. In the latter case, the combination of coronary disease and even moderate aortic stenosis may produce significant symptoms. After baseline hemodynamic measurements are made, an assortment of imaging is performed. This typically includes left ventriculography, aortography and selective coronary angiography. The precise selection of tests is influenced by precatheterization non-invasive results and the patient's renal function which, if abnormal, requires the operator to limit the contrast dye load.

Cardiac catheterization is particularly useful, if not essential, when the aortic stenosis patient has a small valve gradient and reduced left ventricular pump function (low ejection fraction). In such a patient, it is critical to differentiate significant valvular aortic stenosis with resulting left ventricular dysfunction, from "pseudo-aortic stenosis." In the latter case, the patient really has insignificant aortic stenosis, but the calculated aortic valve area is low due to an independent cardiomyopathy producing a low cardiac output.

To differentiate true aortic stenosis from "pseudo-aortic stenosis," we utilize two approaches. One is to complement the calculation of aortic valve area with a measurement of aortic valve resistance.[2] Such a measurement eliminates a part of the formula for aortic valve area that make it less reliable. Typically, a low forward cardiac output will produce an underestimate of the true valve area when the standard (Gorlin formula) aortic valve area is used. Calculation of aortic valve resistance excludes certain mathematical constants and may be more reliable in differentiating true aortic stenosis from pseudo-aortic stenosis.

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A second approach to the patient with "low gradient aortic stenosis" is to perform a pharmacological challenge. A vasodilator, like sodium nitroprusside, or a positive inotropic agent, like dobutamine, is given and the aortic valve area is recalculated. The goal is to raise the cardiac output to at least 4.5 L/min. In "pseudo-aortic stenosis," cardiac output will increase without a concomitant increase in valve area. If there is a significant increase in valve gradient following the drug-induced increase in cardiac output, then true valvular stenosis is present. In this case, the increased cardiac output has produced an obligatory increase in valve gradient as flow increases across the narrowed valve.

The aortic insufficiency patient will require an aortogram. Typically, a view is chosen that delineates aortic root size, the plane of aortic valve and the degree to which the left ventricle is opacified when dye is injected in the central aorta. A left ventriculogram will yield the "angiographic cardiac output." When compared with the forward cardiac output measured by thermodilution method, a "regurgitant fraction" can be calculated. Sometimes the degree of aortic insufficiency is severe enough that a single injection into the central aorta allows assessment of the degree of aortic insufficiency and produces enough opacification of the left ventricle to yield left ventricular wall motion and ejection fraction.

IMPORTANCE OF CORONARY ANGIOGRAPHY

Early on, it was unclear whether or not a patient with symptomatic aortic valve disease should undergo concomitant coronary bypass surgery even if significant coronary disease was present. However, as intraoperative anesthesia and surgical techniques improved, it became clear that the added operative time to allow simultaneous bypass surgery was not deleterious to the patient. At MUSC, we feel it is extremely important to identify and bypass all significant coronary lesions at the time of aortic valve surgery. Recent investigations have suggested that aortic stenosis patients could have their coronary arteries non-invasively assessed using thallium imaging or stress echocardiography. Such investigations have revealed disappointing sensitivities and specificities.[3] We do not believe they are reliable enough to substitute for coronary angiography. Indeed, in the modern echo/Doppler era, with excellent quality controls as we have in our non-invasive laboratory, the most important part of the catheterization protocol in the adult patient with valvular heart disease is the demonstration of coronary anatomy.

MITRAL VALVE DISEASE

The non-invasive assessment of the mitral valve by echocardiography, Doppler study and preoperative/intraoperative transesophageal echo/Doppler studies is discussed elsewhere in this symposium. Rarely is cardiac catheterization needed to make the correct diagnosis. However, there are important reasons to perform cardiac catheterization in the patient with mitral valve disease in whom surgery is considered. For mitral insufficiency, quantitation of that lesion by Doppler studies is only semi-quantitative and is made difficult by the presence of eccentric jets despite using multiple imaging views. Many patients with mitral insufficiency have that lesion secondary to afterload mismatch (functional mitral insufficiency) rather than structural abnormalities of the valve. At the time of cardiac catheterization, one can assess the insufficiency simultaneous with the measurement of intracardiac pressure. This produces a more exact idea as to whether or not the insufficiency is functional or fixed. One can look at the coronary arteries to see if obstructive disease in the distribution of the mitral valve's supportive apparatus is present. A patient with a recent inferior wall myocardial infarction may have significant functional mitral insufficiency that can be attenuated or eliminated by revascularization of the myocardium that subserves the mitral valve apparatus.

The catheterization measurement of end-systolic wall stress/end-systolic volume allows a preoperative assessment of left ventricular contractility.[4] This is most useful in altered loading conditions like mitral insufficiency, where a measurement of left ventricular ejection fraction is an unreliable indicator of left ventricular contractility. Many useful, non-invasive measurements of left ventricular function in mitral insufficiency, such as left ventricular end-systolic diameter, are actually surrogates of this invasively determined ratio of pressure and volume.

For the patient with mitral stenosis, particularly a pre-menopausal woman or man under the age of 40 years, many physicians feel that preoperative catheterization is not needed. Such patients are unlikely to have coronary disease and the information gleaned in the catheterization laboratory is attainable in the echo/Doppler Lab. However, in the patient whose symptoms seem out of proportion to the degree of stenosis, the measurement of pulmonary artery pressures at rest and with exercise is useful. A high pulmonary artery pressure, disproportionate to the mitral valve area, may be due to intrinsic pulmonary vascular disease perhaps secondary to pulmonary embolism or chronic obstructive pulmonary disease.

Recently published guidelines recommend percutaneous mitral balloon valvuloplasty even in asymptomatic mitral stenosis patients, if the pulmonary artery systolic pressure is greater than 50 mm Hg at rest, or increases above 60 mm Hg with exercise.

SUMMARY AND CONCLUSION

Despite impressive advances in non-invasive technology, cardiac catheterization remains the gold standard for the evaluation of patients considered for valve surgery. Diagnostic information should be combined with non-invasive measurements, particularly serial non-invasive echocardiographic assessments, to allow for optimal management decisions. For adult patients with risk factors for coronary artery disease, we do not believe there is any substitute for selective coronary angiography. The availability of non-ionic contrast agents, pre-assessment by thorough physical examination and non-invasive techniques, allows safe cardiac catheterization even in patients who are severely compromised by congestive heart failure and/or coronary artery disease.

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CURRENT CONCEPTS IN HEART VALVE SURGERY

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The Medical University of South Carolina has been involved in the surgical management of patients with valvular heart disease since 1948 when Horace Smithy, one of the first full time faculty members of the Department of Surgery, became one of the very first surgeons to operate successfully upon patients with rheumatic mitral stenosis. Unfortunately the premature death of Dr. Smithy at age 37, which ironically occurred secondary to rheumatic mitral and aortic stenosis, probably robbed this institution of a unique opportunity to be an early leader in the development of cardiac surgery. Closed mitral valvotomy was performed successfully by Harkin and Bailey later that year. In 1960 Hufnagle first successfully replaced the aortic valve, and in 1961 Starr first successfully replaced the mitral valve. Although there were problems with some of the early prosthetic valves, valve replacement surgery became the gold standard for patients with valvular heart disease. Recently, numerous innovations have occurred including the development of new prostheses; the use of homografts and even pulmonary autografts to replace the aortic valve; valve repair instead of valve replacement; and most recently, "minimally invasive" techniques which permit valve surgery to be done through smaller incisions. Currently over two hundred patients each year undergo some type of valve procedure at MUSC. Established techniques in valve surgery including expected results as well as more recent innovations will be described.

AORTIC VALVE

Aortic valve surgery may be necessary for patients with aortic stenosis, aortic insufficiency, or a combination of the two. In our practice, the most common aortic valve lesion today is progressive calcific aortic stenosis secondary to aging, which occurs more commonly on bicuspid aortic valves. Repair of the aortic valve can rarely be performed except in a very select group of patients with aortic insufficiency. Accordingly, the gold standard has been and remains aortic valve replacement with a prosthetic valve. While the operative risk in uncomplicated patients is generally less than three-five percent, patient-related factors such as age, type of valvular lesion (stenosis vs. insufficiency), coronary artery disease, infection, and severe left ventricular dysfunction may increase this risk. Long term results are likewise influenced by these as well as other factors.

Prosthetic valves available for aortic valve replacement can be broadly grouped into two categories—mechanical and tissue. Mechanical valves are manufactured from a variety of materials such as carbon alloys and have the advantage of being extremely durable and hemodynamically efficient except in the smaller sizes. All mechanical valves require long term anticoagulation with coumadin in order to prevent valve thrombosis and/or thromboembolism. We have prospectively followed on a yearly basis all patients undergoing valve surgery at MUSC since 1980. The predicted freedom from thromboembolic events in our patients undergoing aortic valve replacement with St. Jude prostheses is 73 ± five percent at 15 years. Unfortunately, coumadin, which is administered to prevent thromboembolism, may cause bleeding complications, and in our series of St. Jude patients, the predicted freedom from a significant bleeding complication at 15 years is 79 ± three percent. Other groups have had quite similar results with other comparable mechanical prostheses such as the Medtronic-Hall, the Carbomedics valve, and others. The alternate valve is a tissue valve such as a porcine valve that is treated with glutaraldehyde and mounted on a prosthetic frame so that it can be easily implanted. Tissue valves have the advantage of not requiring long term anticoagulation and thus bleeding complications are minimized. Thromboembolic events still occur but in the MUSC series of porcine valves, the predicted freedom from thromboembolism at 15 years is 76 ± seven percent. The disadvantage of the porcine, and indeed of all tissue valves, is that structural degeneration limits the expected life of the valve. In the MUSC series of patients with porcine aortic valves, freedom from structural valve failure is 84.6 ± 6.2 percent at ten years (compared to the complete absence of structural valve failure in the St. Jude patients). Structural deterioration is related to the age of the patient and is much more severe in children and younger adults than in older patients. Because of these problems with the porcine valve in the aortic position, we changed to a tissue valve manufactured from bovine pericardium in 1992. This valve has all of the advantages of the porcine valve (no anticoagulation required, decreased bleeding complications) but appears to be more hemodynamically efficient and less likely to undergo structural deterioration. In centers initially involved with the experimental evaluation of this valve, freedom from structural deterioration is as high as 90 percent at 15 years and deterioration occurs much less frequently in the older population. We currently use the St. Jude mechanical valve routinely in patients up to about 70 years of age if there is no contraindication to anticoagulation and in patients older than this usually recommend the pericardial valve since it is unlikely to wear out during the patient's expected lifetime. When structural deterioration does occur, it has been our experience that the first elective reoperation carries an operative risk (four percent) similar to the initial operation, but that subsequent reoperations, emergency procedures, and Class IV symptoms significantly increase the risk of reoperation.

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In recent years, aortic valve replacement with homograft (allograft) valve obtained from cadavers and cryopreserved at -196°C has gained increased popularity. Cryopreserved homograft valves do not require anticoagulation, have no bleeding complications, are resistant to infection, and are hemodynamically efficient. However, implantation of these valves is technically more difficult and the question of long term durability has not been completely answered. It appears that these valves have increased durability compared to porcine and pericardial valves, but there is early evidence to indicate that this durability may be limited to 20 years or less. At MUSC, we have limited the use of homograft valves in the aortic position to patients with specific indications such as bacterial endocarditis, and repeated operations for paravalvular leaks.

It is obvious that no prosthetic aortic valve is free of problems and for this reason, there has been increasing interest in an operation first performed by Ross in 1967. The "Ross procedure" (pulmonary autograft) involves removal of the patient's own pulmonary valve which is then implanted into the aortic position with replacement of the patient's pulmonary valve with a cryopreserved homograft. Unlike human cryopreserved valve homografts, the natural pulmonary autograft neither calcifies nor degenerates over time. Autografts explanted up to 25 years postoperatively have shown retention of cellular viability and failures have not been due to degeneration. Early technical problems with the pulmonary autograft were related mostly to the technique of implantation, but the choice of most surgeons today, including ourselves, is to implant the pulmonary autograft as a complete aortic root replacement with reimplantation of the coronary arteries. The pulmonary autograft has several significant advantages including complete freedom from thromboembolic complications in the absence of any anticoagulation and normal hemodynamic function. These advantages make the procedure particularly appealing to physically active patients, especially children, and to women planning pregnancy. The greatest advantage of the pulmonary autograft, however, occurs in small children where the pulmonary autograft has the potential to grow as the child grows. This makes the pulmonary autograft a potentially permanent valve replacement procedure in children as young as one month of age. The major disadvantage is that the patient's pulmonary valve must be replaced with a homograft which can be expected to fail over a period of time and may require reoperation.

Reoperation for replacement of the pulmonary homograft generally carries a much lower risk than for replacing an aortic valve prosthesis. Ross's original series illustrates a freedom from reoperation on the homograft of 80 percent at 20 years. We have gained increased experience with the pulmonary autograft (Ross procedure) primarily in small children and young adults at MUSC over the last five years. There have been no operative deaths, and residual or recurrent aortic insufficiency has been insignificant. In larger series, the operation carries a slightly higher operative risk because of dangers associated with removing the pulmonary valve and the operation is contraindicated in patients with bicuspid or otherwise abnormal pulmonary valves and in patients with Marfan's Syndrome.

MITRAL VALVE

The number of patients with rheumatic valve disease continues to decrease at MUSC. Simultaneously, there has been a tremendous increase in patients with degenerative mitral valve disease. For many years, mitral valve replacement with a prosthetic valve represented the standard to which all other mitral valve procedures were compared. Mitral valve replacement is associated with an operative mortality of three to five percent in uncomplicated patients, but operative risk again is increased by type of lesion (insufficiency > stenosis), increasing age, severe left ventricular dysfunction, and coronary artery disease. Prostheses available for mitral valve replacement are either mechanical or tissue as described previously. In general, mechanical prostheses are durable and efficient but require long term anticoagulation whereas tissue prostheses are prone to structural degeneration (more so than in the aortic position). Since many patients with mitral valve disease remain in chronic atrial fibrillation following surgery, some patients will require anticoagulation even if they have received tissue valves. Accordingly some have advocated that mitral valve surgery be combined with the "Maze procedure" for atrial fibrillation and we have performed this combined procedure in selected patients. Mitral valve prostheses are slightly more prone to thrombosis/thromboembolism than identical aortic valve prostheses, and in our series of patients with St. Jude mitral prostheses, the freedom from thromboembolism at 15 years is 59 ± seven percent, while that for porcine valves is 76 ± five percent. Pericardial valves are not currently available for the mitral position.

Despite a significant experience with valve repair in children with congenital heart disease, this procedure did not gain popularity in adults until the 1980s when Carpentier in Paris demonstrated that mitral valves may be classified into different categories depending upon the underlying pathology and that the majority of these valves could be repaired successfully. Mitral valve repair offers numerous potential advantages including the lack of need for anticoagulation, no bleeding problems, decreased incidence of thromboembolism, lack of foreign material, and decreased costs. At the same time, repair is more technically difficult and more time-consuming, something that must be considered when valve repair is being combined with other lengthy procedures. In some patients, mitral regurgitation occurs from simple progressive dilatation of the mitral valve annulus which results in failure of the leaflets to coapt appropriately. This may be remedied by insertion of a prosthetic ring which symmetrically and circumferentially decreases the size of the annulus, thus allowing the valve leaflets to coapt. In other patients, regurgitation may be due to pathology of the leaflets such as ruptured chordae, prolapse, or infection. The posterior leaflet is most often affected, and Carpentier demonstrated that up to 50 percent of a diseased posterior leaflet can be resected. In approximately one-third of the patients, mitral regurgitation is caused by anterior leaflet pathology which is more difficult to repair. Although several techniques have been advocated for anterior leaflet repair, our current preference is to replace diseased chordae with artificial chordae (usually Gore-tex sutures). Following leaflet repair, most feel that an annuloplasty ring (partial or complete) is necessary to stabilize the annulus and prevent further dilatation. Intraoperative transesophageal echocardiography is an extremely important technique which allows the surgeon and cardiologist to immediately assess under physiologic conditions the adequacy of the repair which has been performed.

At MUSC, with rare exception, all mitral valves are approached with the intent to repair if at all possible. Mitral valve replacement is reserved for patients in whom repair is not possible, such as valves which have extremely heavy calcification, advanced rheumatic disease with immobile valves, and elderly patients undergoing valve surgery in combination with other extensive cardiac procedures. Since mitral valve replacement is more likely to be required in such "end stage" patients, it is logical to perform surgery at an earlier stage in the patient's disease. This is even more logical since mitral valve repair is associated with improved long term survival compared to mitral valve replacement. Left ventricular function is better maintained following mitral repair presumably in part related to the maintenance of the normal relationship between the mitral valve annulus, the chordae tendineae, and the papillary muscles. This observation has been transferred to patients in whom mitral valve replacement is performed. With rare exception, the majority of the supporting apparatus to the mitral valve is maintained at the time of mitral valve replacement today as compared to the older techniques where papillary muscles and chordal attachments to the annulus were not preserved.

At the present time, no generally available alternative to tissue and mechanical valve prostheses is available for mitral valve surgery although very recently, a few patients in whom fresh or cryopreserved mitral valve homografts have been implanted have been described, but the experience is too small and the follow-up too short to draw any meaningful conclusions.

TRICUSPID VALVE

Tricuspid valve surgery is required much less frequently than aortic or mitral. It is usually necessary because of tricuspid regurgitation secondary to progressive dilatation of the tricuspid valve as a result of elevated right ventricular pressure (pulmonary hypertension) secondary to aortic or mitral valve disease. Tricuspid valve repair with an annuloplasty ring is almost always successful and tricupsid valve replacement is rarely required.

ANTICOAGULATION

As noted, all mechanical prosthetic valves require long term anticoagulation. Anticoagulation is monitored by prothrombin time determinations and previously anticoagulation was maintained in the range of 20 to as high as 30 seconds. It has been shown that prothrombin time determinations may vary widely among laboratories because of the different reagents. Most recently, the International Normalized Ratio (INR) has been found to be a more reliable indicator of anticoagulation It has been well documented that newer prosthetic valves such as the St. Jude valve can be maintained at a significantly lower level of anticoagulation. It is currently our practice to maintain patients with St. Jude aortic valves at an INR of 2.5-3.0, and patients with St. Jude mitral valves at an INR of 3.0-3.5. In addition, in those patients in whom it is tolerated, we add one baby aspirin per day. We have been particularly interested in the need for anticoagulation in children, and a recent review of our experience with St. Jude valves in children indicated that either coumadin or aspirin plus dipyridamole provide equal protection against clotting complications.

MINIMALLY INVASIVE TECHNIQUES

For many years, the median sternotomy has been the standard incision for valve surgery. While ideal exposure is obtained with this incision, objections to it include "poor" cosmetic results, postoperative pain, occasional infection, prolonged hospital stay, and delayed return to work. The recent success with minimally invasive approaches to the abdomen and other thoracic organs have spurred an interest in alternate approaches for valve surgery. We have recently utilized in selected patients a limited upper sternotomy performed through an incision approximately 3" in length for aortic valve replacement. The aorta and right atrium are available for cannulation, and exposure of the aortic valve is generally good. The internal mammary arteries are not disturbed. It is not clear that this approach results in decreased post-op pain, but post-op bleeding appears to be less and the cosmetic result slightly superior. Mitral valve surgery has been performed through generous right anterior thoracotomies for years and some have preferred it for reoperations. New minimally invasive approaches for the mitral valve involve smaller version of this incision. A few surgeons have used video thoracoscopic techniques to improve exposure and to limit the size of incisions that are necessary for implanting the mitral valve, but to date, these have not gained widespread use. These minimally invasive techniques described here are evolving rapidly and may ultimately prove to be the preferred approaches, at least in some patients. However, the results obtained from these "new" approaches must be constantly measured against the consistently excellent results obtained through the standard median sternotomy incision.

SUMMARY

After a period of relatively regimented approaches for mitral and aortic valve surgery, recent years have seen numerous innovations including improved prostheses, improved techniques for repair, better understanding of the physiology of ventricular function and myocardial protection, advances in anticoagulation control, and most recently the application of minimally invasive techniques. Each of these has contributed to the improved short and long term results obtained from valve surgery, and further evolution of these techniques will undoubtedly improve the results even more. As operative risks are decreased and long term results are improved, it is hoped that patients with valvular heart disease will be referred at progressively earlier stages of their disease for consideration for surgery. Earlier referral increases the likelihood that valve repair will be possible in the case of the mitral valve and also increases the odds that the outcome from valve surgery will be successful for both aortic and mitral valves.

BALLOON AORTIC VALVULOPLASTY: FIVE YEAR EXPERIENCE AT MUSC

BRUCE W. USHER, JR., M.D.*
BRUCE W. USHER, SR., M.D.

Balloon aortic valvuloplasty (BAV) as an alternative to aortic valve replacement in the adult patient with severe aortic valve stenosis was first reported by Cribier *et al.* in 1986.[1] Subsequently, there have been several large studies looking at results of the procedure, both immediate and long term.[2,3,4,5] Immediate results are impressive with a vast majority of the elderly patients showing marked symptomatic improvement. Unfortunately, unlike patients with congenital aortic stenosis who have favorable intermediate and long term results,[6] the elderly with degenerative calcific valvular aortic stenosis exhibit, almost universally, evidence of restenosis within six months to a year. The question then arises as to the appropriateness or place of BAV in the management of adult patients with severe valvular aortic stenosis. In order to attempt to answer this question, we retrospectively reviewed our recent experience of BAV at the Medical University of South Carolina.

MUSC EXPERIENCE

We retrospectively reviewed our results with BAV performed at MUSC between 08/15/94 and 08/16/99. A total of thirty-five patients underwent BAV for valvular aortic stenosis. The same attending interventional cardiologist performed all of the procedures with the assistance of cardiology fellows. Prior to the procedure, a cardiologist and cardiothoracic surgeon evaluated all patients. BAV was performed via the retrograde femoral approach. Sequential balloon dilatations were performed using a single balloon technique. Balloon sizes ranged from 18 - 25mm. Left ventricular and aortic pressures were measured pre and immediately post valvuloplasty. In most of the cases, right heart catheterization was performed at the same time in order to determine thermodilution cardiac output for calculation of the aortic valve area. All of the patients except one had degenerative calcific aortic stenosis as evidenced by the mean age of 80 years. The one exception was a 27-year-old female patient with severe stenosis of a congenital bicuspid aortic valve. The majority of the patients underwent BAV due to NYHA class III or IV congestive heart failure. Four (11 percent) patients had the procedure performed as a bridge to aortic valve replacement due to the need for urgent noncardiac surgery. One patient refused aortic valve replacement and five years later at age 91 underwent her third successful BAV. Table 1 outlines our immediate results. Only one patient did not have either a decrease in mean gradient or increase in aortic valve area. This patient had an ejection fraction of 20 percent with severe low cardiac output symptoms. The procedure was performed as a last resort, palliative measure. The patient subsequently died one week later with a progressive low output state.

COMPLICATIONS

Both the complication rate and type of adverse events in our series are similar to that of larger published studies. Table 2 outlines our acute procedural complications. As in other studies, vascu-

Number patients		35
Age (mean)		80 (27-91)
Gender		
Female		66%
Male		34%
AVA	Pre BAV	0.55 cm^2 (0.3-0.9)
	Post BAV	0.85 cm^2 (0.5-1.2)
Gradient (mean)		
	Pre BAV	54 mmHg (20-96)
	Post BAV	29 mmHg (9-46)

Table 1. Immediate Results with BAV: MUSC Experience

---

* Address correspondence to Dr. Usher at Cardiology Division, Dept. of Medicine, MUSC, Charleston, SC 29425.

Complication	
Total	7(20%)
Mortality	1(3%)
Ventricular perforation	
Vascular trauma	5 (14%)

Table 2. Acute Complications with BAV: MUSC Experience

lar trauma was the most common complication. Of our five vascular complications, three were thrombotic or embolic requiring emergent thrombectomy/embolectomy, one pseudo aneurysm repair of the femoral artery, and one iliac vein laceration leading to a retroperitoneal bleed requiring transfusion.

DISCUSSION

As the general population continues to live longer, physicians will see more patients in their eighth and ninth decades of life with severe calcific valvular aortic stenosis. Unfortunately, with this increase in life expectancy comes an increase in other co-morbid illnesses and the associated higher morbidity and mortality rates with surgical procedures. Previous studies have shown that long term, event-free survival post BAV is poor and resembles the natural history of untreated symptomatic aortic stenosis.[2,4,5] The Mansfield registry reported one-year survival rate of 67 percent and event free survival of 43 percent.[5] Likewise , the NHLBI Registry reported one and three year survival rates of 55 percent and 23 percent, respectively.[3] O'Keefe *et al.* reported the actuarial survival rates of patients with severe aortic stenosis treated medically at one, two and three years to be 57 percent, 37 percent, and 25 percent, respectively.[4]

BAV can be safely performed with impressive immediate results and an overall >80 percent success rate. Most patients will experience an improvement in NYHA functional class post BAV. Although up to 75 percent of the elderly exhibit hemodynamic evidence of restenosis by one year, many of these patients remain symptomatically improved if not asymptomatic for an extended period of time despite restenosis.[8] Accordingly, in selected elderly patients with symptomatic severe calcific aortic valve stenosis who are not felt to be operative candidates, we feel it reasonable to offer BAV as a palliative procedure. Patients with congestive heart failure symptoms and normal left ventricular systolic function are the patients who should benefit most since ventricular function is the most important determinant of long term survival.

Aortic valve replacement has been performed successfully in patients post BAV. Thus, BAV as a bridge to aortic valve replacement might be reasonable in certain situations. It appears that the patients who would most benefit from this approach are those who are good surgical candidates. In our experience we have performed BAV in four patients who needed urgent non cardiac surgery, of which several have gone on to have successful aortic valve replacement. An important caveat with this approach is the understanding that BAV does not completely resolve the underlying hemodynamic abnormalities and careful invasive perioperative monitoring by skilled professionals is required.

Although our experience with BAV of congenital aortic valve deformities producing aortic stenosis is limited to one patient, this approach appears promising in the adult patient when the valve is not calcified. To date at one-year followup, our patient remains asymptomatic. However, long term followup of such patients will be essential before offering this procedure as routine treatment for congenital aortic valve stenosis in the adult.

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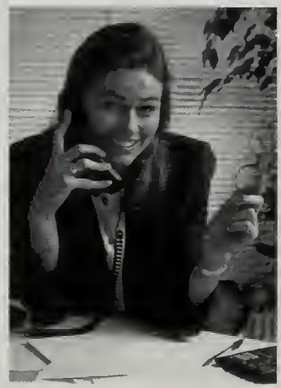

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On the Cover:

SYMPOSIUM ON VALVULAR HEART DISEASE

According to Garrison and Morton's listing of classics in the history of medicine, Giovanni Battista Morgagni (1682-1771) provided "classic descriptions of mitral stenosis and heart block, Stokes-Adams syndrome"[1] in his *De sedibus et causis morborum per anatomen indagatis libri quinque. . . . 1765.* This work was completed in Morgagni's 79th year and consists of 70 letters reporting about 700 cases and necropsies. In 1769 Morgagni's work was translated into English by B. Alexander.

In South Carolina, in the April 1947 issue of *Surgery, Gynecology and Obstetrics* (vol. 84), Horace G. Smithy, M.D. and Edward F. Parker, M.D. published an article entitled *Experimental Aortic Valvulotomy: A Preliminary Report* in which they begin by stating, "the possibility of a direct surgical approach to the problem of chronic valvular disease of the heart has been considered by surgeons for many years. Since the proposal of Brunton, in 1902, in which hope was expressed for the ultimate relief of mitral stenosis by surgical means, little of significance has been accomplished despite numerous clinical and experimental observations by several investigators."

On January 30, 1948, Horace G. Smithy, M.D., 34-year-old assistant professor of surgery at the Medical College of the State of South Carolina, successfully removed scar tissue from a heart valve of a young incapacitated girl. The technique used was based on two years of experimentation. His research included the design of a new instrument, known as a valvulotome, to cut scar tissue blocking heart valves of rheumatic fever victims. Dr. Smithy subsequently operated upon six additional patients, four of whom survived.

Dr. Smithy himself had valvular heart disease as a result of rheumatic fever during childhood, and his condition began rapidly deteriorating in 1948. He requested of Dr. Alfred Blalock, Professor of Surgery at The Johns Hopkins University, to carry out the procedure on him, but before this could be arranged, Dr. Smithy died on October 28, 1948.

The beautifully executed illustrations for this month's cover story were prepared by medical artist L. Schlossberg for Dr. Smithy to use in an October 1948 presentation to the American Association of Chest Physicians in Miami. Dr. Smithy went into failure several days before this presentation and asked J. Manly Stallworth, M.D., a second year resident, to present the work. Dr. Stallworth presented the paper and flew back to Charleston to report to Dr. Smithy on the reaction of the audience prior to his death.

The caption for the cover picture reads: Showing the pericardium divided anteriorly and parallel to the phrenic nerve. Following infiltration of one percent procaine into a relatively avascular area of the left ventricular myocardium, a purse-string of 00 chromic catgut is placed, and an incision through the ventricular wall within the confines of the pursestring suture is made. Hemorrhage is controlled with digital pressure until the valvulotome is inserted into the wound.

Jane McCutchen Brown
Waring Historical Library

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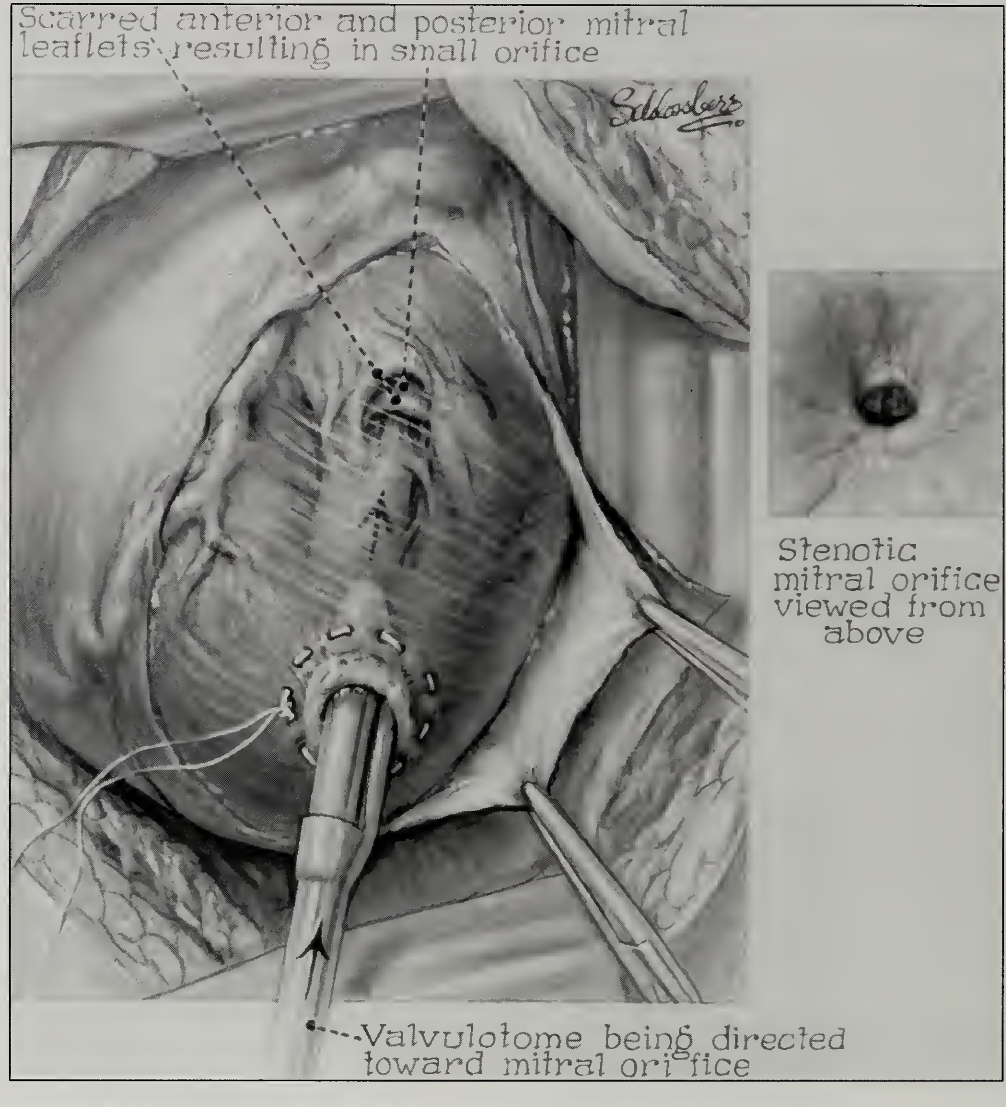
Scarred anterior and posterior mitral leaflets resulting in small orifice
Stenotic mitral orifice viewed from above
Valvulotome being directed toward mitral orifice

Showing the valvulotome being advanced toward the mitral valve. The serrated cutting surfaces of the instrument are held closed.

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JANUARY

Saturday January 29, 2000
Columbia, SC: Summit Club
South Carolina Psychiatric Association Annual Meeting
SPONSOR: South Carolina Department of Mental Health Division of Education, Training and Research
TARGET AUDIENCE: Psychiatrists
TUITION: $125 members, $200 nonmembers, $25 residents
CONTACT: Tara Smith; ext. 242, (803) 798-6207 or (800) 327-1021

FEBRUARY

Friday - Saturday February 4-5, 2000
Columbia, SC: Embassy Suites Hotel
South Carolina Chapter of the American College of Surgeons Annual Meeting
SPONSOR: American College of Surgeons
TARGET AUDIENCE: Surgeons
TUITION: $200, no charge for residents
CONTACT: Tara Smith; ext. 242, (803) 798-6207 or (800) 327-1021

Monday – Saturday February 14-19, 2000
Augusta, GA: Medical College of Georgia
Primary Care and Family Practice Symposium
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Family practice, multispecialty
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 52 hours, AMA Category 1

Wednesday February 16, 200
Greenville, SC: Toomey Conference Center/Greenville Memorial Hospital
Heart Day 2000 "Congestive Heart Failure Therapies"
SPONSOR: Greenville Hospital System
DESCRIPTION: Cardiology update with primary care focus.
TARGET AUDIENCE: Primary Care
FACULTY: Michael Higginbotham, MD; Sara Paul, RN, MSN, FNO,
CONTACT: Hurschell Mathews; (864) 455-7814
CREDITS: 4.5 hours, AMA Category 1

Tuesday – Thursday February 22-24, 200
Augusta, GA: Medical College of Georgia
Transcranial Doppler and Imaging in Children wit Sickle Cell Diseases
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Neurology, hematology/oncology, pediatrics, radiology
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 24 hours, AMA Category 1

Friday – Saturday February 25-26, 2000
Augusta, GA: Radisson Riverfront Hotel
Flexible Fiberoptic Sigmoidoscopy
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Family practice, internal medicine
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 16 hours, AMA Category 1

Saturday February 26, 2000
Charleston, SC: Westin Francis Marion Hotel
Liver Disease Symposium
SPONSOR: Medical University of South Carolina
DESCRIPTION: This symposium is designed to update the gastroenterologists, internists, and family physicians in the area of treatment and management of liver disease.
TARGET AUDIENCE: Gastroenterologists, internists, and family physicians
FACULTY: Guest and MUSC faculty
CONTACT: Pamela Benjamin; (843) 876-1925

MARCH

Friday – Saturday March 17-18, 2000
Augusta, GA: Radisson Riverfront Hotel
Ophthalmology – Anterior Segment Update
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Ophthalmologists
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 16 hours, AMA Category 1

Monday – Wednesday March 20-22, 2000
Charleston, SC: Charleston Place Hotel
OB/GYN Spring Symposium
SPONSOR: Medical University of South Carolina
DESCRIPTION: This symposium is designed to be clinically oriented and applicable to the every day practice for women's health providers including obstetricians/gynecologists as well as other specialists.
TARGET AUDIENCE: Obstetricians and gynecologists
FACULTY: Guest and MUSC faculty
CONTACT: Pamela Benjamin; (843) 876-1925

Friday – Sunday March 24-26, 2000
St. Simons Island, GA
Pediatric Neurologic, Neurosurgical, and Rehabilitation Interventions for Those with Disabilities
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Neurology, pediatrics, psychiatry, psychology, family practice
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 16 hours, AMA Category 1

Monday – Wednesday March 27-29, 2000
Charleston, SC: Charleston Place Hotel
10th Charleston Pulmonary and Critical Care Symposium
SPONSOR: Medical University of South Carolina
DESCRIPTION: This symposium is designed to provide a clinically based update in pulmonary and critical care medicine. The three half-day courses will emphasize a pathophysiologic approach to diagnosis and management of diseases of the chest.
TARGET AUDIENCE: Pulmonologists and internists
FACULTY: Guest and MUSC faculty
CONTACT: Odessa Ussery; (843) 876-1925

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Alliance Page

PHYSICIAN'S FAMILY SUPPORT PARALLELS PAAC

Because physicians are dedicated to helping others, it is often extremely difficult for them to ask for help for themselves, or even to admit to themselves that they might need help. Society expects doctors to have all the answers and be able to solve all problems. This unrealistic expectation affects not only the doctor, but it also spills over into the "medical family" as well.

What happens when a physicians needs help? Does the physician have to suffer in silence, struggling to "keep up appearances," trying to appear "strong" and "perfect" for the public and the patients while his/her own life, marriage, and practice crumble around him/her? Are physicians and their families immune to alcoholism, drug addiction, mental illness, aging and senility, abuse, grief, long-term illness, malpractice suits, marital and family problems? Of course not!

How can a physician or medical spouse get help? A confidential phone call (800-327-1021, ext. 232) to Cathy Boland at SCMA Headquarters can put any physician or his/her spouse in touch with someone who can help. South Carolina has a complete network of physicians and their spouses who provide help and support to medical families—the SCMA Physician's Advocacy and Assistance Committee (PAAC) and its Alliance parallel, the Physician's Family Support Committee. These groups are made up of people who have been there, people who know what you are feeling and the problems you are facing—people who know how to help.

Regional teams provide peer support for fellow physicians. Issues relating to treatment, licensure, malpractice, finances, legal issues, managed care contracts, and other job and practice issues can be addressed confidentially at weekly Caduceus (Medical AA) meetings and quarterly PAAC meetings or with an individual PAAC physician. Spouses can attend "Caduceus Al-Anon."

The Annual Alcohol and Drug Issues Conference in Columbia (December 4-5, 1999) is an excellent meeting addressing the problems of substance abuse, which continues to be a cause of death and disability in the United States. Spouses are encouraged to attend this meeting and the workshop, "Family Issues and Addiction."

Perhaps things aren't "quite right" but you can't put your finger on it. Consider the possibility of addiction. It's a much more prevalent problem than people think and there is quite a bit of confidential, non-threatening help available. We all need help from time to time and medical families are no exception. Please call for information: Cathy Boland at SCMA (800-327-1021, ext. 232) or Barbara Clark of PAAC (864-654-5680.)

Kay Borgstadt and Barbara Clark,
PAAC Appointees

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

HOW LONG WILL $1,000,000 LAST?

$1,000,000 sounds like a lot of money. That's because we're used to thinking in terms of *income* rather than *capital*. However, if we consider the income that $1,000,000 will produce, it doesn't seem like much. This table shows how many years $1,000,000 will last.

	INTEREST RATE		
MONTHLY INCOME	***6%***	***8%***	***10%***
$5,000	27.0	38.0	Forever
$6,000	20.0	24.8	36.0
$7,000	16.0	18.7	23.0
$8,000	13.4	15.1	17.5
$9,000	11.6	12.7	14.3
$10,000	10.2	11.0	12.1

Example: If you begin with $1,000,000 and continuously earn 8% interest, you can withdraw $6,000 per month for 24.8 years. The fund will then be depleted.

Assumes spendable dollars after income taxes in a 35% combined federal and state bracket.

HOW LONG DOES IT TAKE TO ACCUMULATE $1,000,000?

If you want to accumulate a fund of $1,000,000 in the future, the following chart shows how many years it will take.

	INTEREST RATE		
MONTHLY SAVINGS	***6%***	***8%***	***10%***
$1,000	29.5	24.5	22.2
$1,500	24.5	20.8	18.9
$2,000	20.8	17.9	16.5
$2,500	18.7	15.8	14.5
$3,000	15.8	14.5	12.8

Example: If you earn 8% per year and can save $2,000 per month, it will take 17.9 years to accumulate $1,000,000.

Views expressed herein are those of the authors only and in no way represent the SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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